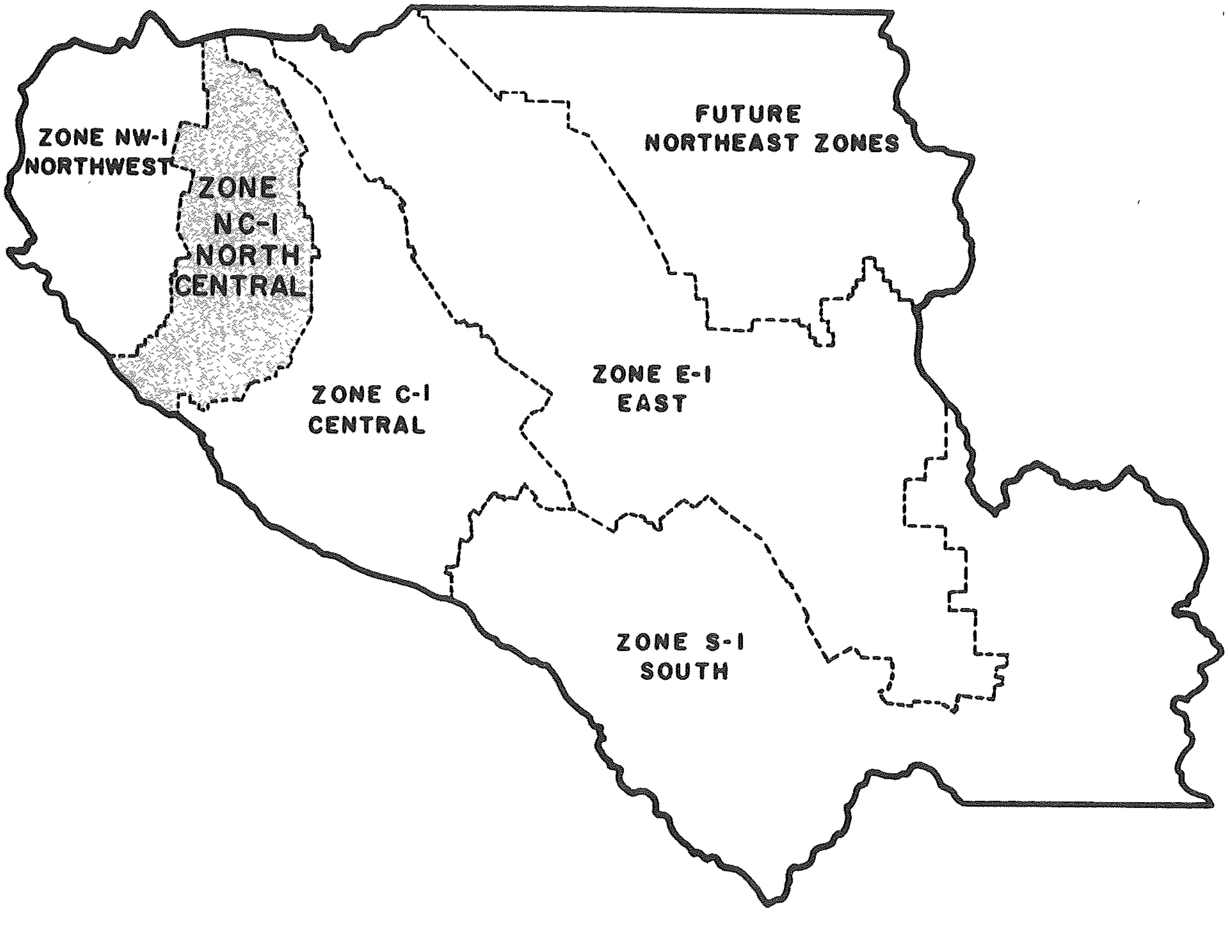
SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT



ENGINEER'S REPORT OF PROPOSED IMPROVEMENTS FOR ZONE NC-1, THE NORTH CENTRAL ZONE

JANUARY 1961

ENGINEER'S REPORT

PROPOSED IMPROVEMENTS FOR ZONE NC-1

PROJECTS 2, 3, 5, 6, 7, 8, 10, 15, 16, 20, 21, 24

JANUARY 1961

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

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DEPARTMENT OF PUBLIC WORKS

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SANTA CLARA COUNTY FLOOD CONTROL
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SAN JOSE 10, CALIFORNIA
CYPRESS 5-1050

January 1961

Honorable Board of Supervisors
County of Santa Clara
20 West Rosa Street
San Jose 10, California

Gentlemen:

Transmitted herewith is the Engineer's Report on the Proposed Improvements for Zone NC-1 (North Central) of the Santa Clara County Flood Control and Water Conservation District. This report includes twelve proposed projects consisting of a total of 52.3 miles of channel improvements. The estimated total cost of these flood control facilities is $12,750,000 and it is believed that a bond issue in this amount can be financed by a maximum bond tax rate of 15 cents, plus 5 cents for current operating expense, making a maximum total of 20 cents per $100 of assessed value.

It is recommended that your Honorable Board hold a public hearing on these proposed improvements as required by law.

Very truly yours,

James B. Enochs

JAMES B. ENOCHS
Director of Public Works

JP:JBE:am

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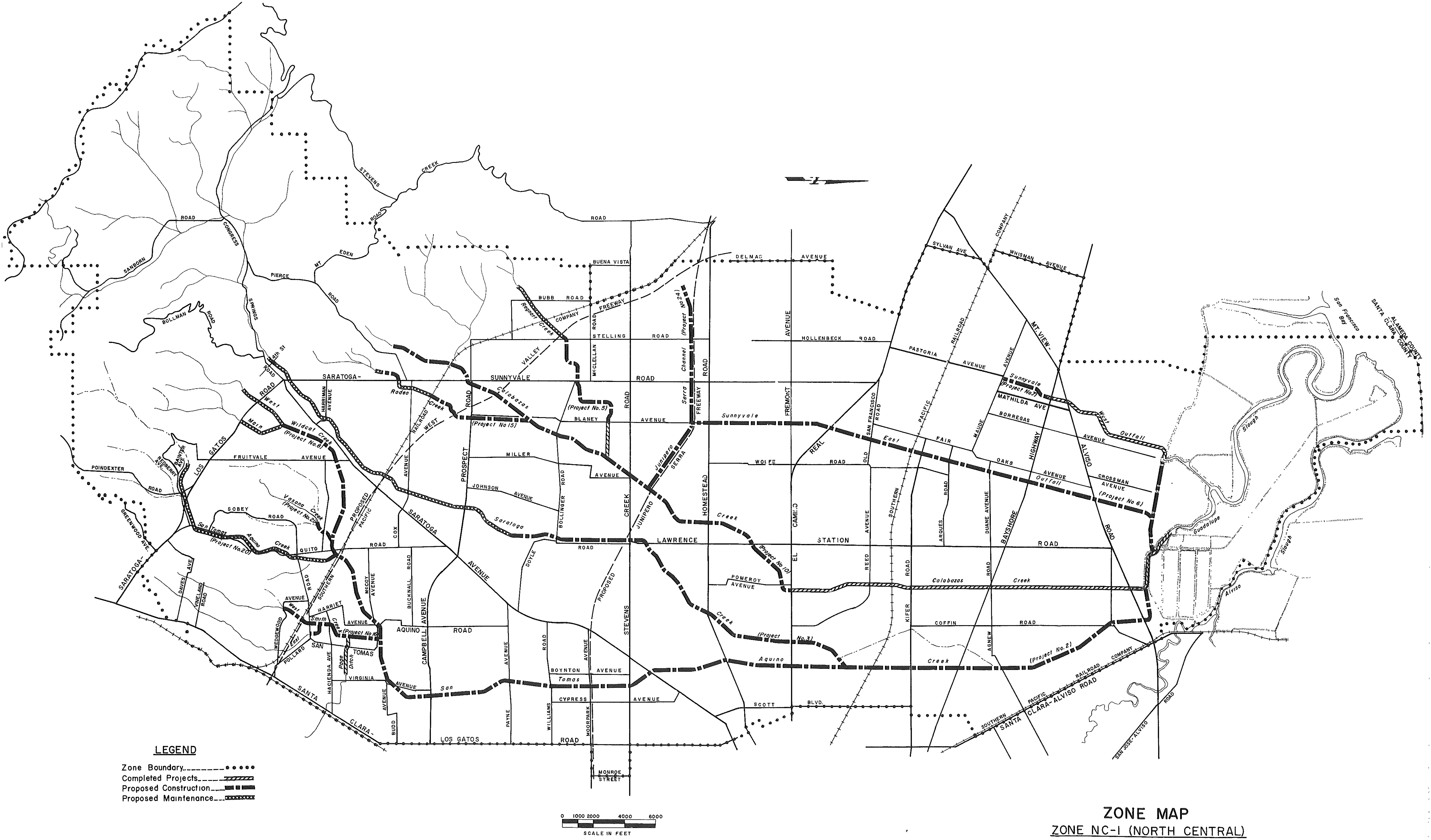


ZONE MAP

ZONE NC-1 (NORTH CENTRAL)

INTRODUCTION

This report recommends improvements to certain waterways in Zone NC-1 of the Santa Clara County Flood Control and Water Conservation District (hereinafter referred to as the North Central Zone), which are presently causing damage from flooding or erosion and are retarding the orderly development of the Zone. The report which was authorized by the Board of Supervisors covers the improvement of the three major streams and their tributaries in the North Central Zone. These streams are the Calabazas Creek, the Saratoga Creek and the San Tomas Aquino Creek. In addition, two major artificial drainage channels in the Sunnyvale area have been included. These channels have been named the Sunnyvale East Outfall and the Sunnyvale West Outfall. The report discusses the problems connected with the flood control program in the North Central Zone and shows how it can be accomplished at a maximum rate of 20 cents per $100 of assessed valuation -- a reduction of at least 5 cents from the current rate for the fiscal year 1960-61. The report (comprising this document and the maps and general construction plans attached hereto) shows:

1. A general description of the work proposed to be done, together with general plans, profiles, cross sections and general specifications relating thereto, on each project constituting the improvement.

2. A general description of the land, rights of way, easements and property proposed to be taken, acquired or injured in carrying out said work.

3. Maps which show the location of each of said projects constituting the improvement and land, rights of way, easements and property to be taken, acquired or injured in carrying out said work, and any information in regard to the same that is deemed necessary or useful.

4. An estimate of the cost of the improvement in Zone NC-1 and each of the projects constituting the improvement, which includes an estimate of the cost of land, rights of way, easements and property proposed to be taken, acquired or injured in carrying out said improvement, and also of all incidental expenses likely to be incurred in connection therewith, including legal, clerical, engineering, superintendence, inspection, printing and advertising, and the total amount of bonds necessary to be issued to pay for the same.

HISTORICAL FLOODS

The earliest known flood of record is for the year of 1861-62. This flood is generally regarded as one of the greatest in California. Other severe floods have occurred in 1892-93, 1910-11, 1918-19, 1940-41, 1951-52, 1955-56 and 1957-58. The areas adjacent to San Francisco Bay from Moffett Field to Alivso were flooded from four to seven feet deep in many of these years.

Other regions in the North Central Zone as far south as Saratoga have experienced damaging inundations many times.

During a storm occurring in September 1918, between 25% and 50% of the prune crop was destroyed by floods, and heavy damage occurred to tomatoes, peaches, hay and grain. It was estimated that damages to crops in the County ran into several millions of dollars, but the exact amount cannot be found in the records. This is the only record of a storm occurring this early in the season.

A flood occurred in January of 1952 which covered large portions of the Zone. Damage to private property in the County was estimated at over $500,000 and there was a loss of one life. Damage to creeks was not estimated, but immediate and accumulated damage to roads and bridges approached $700,000 in the County.

In 1955-56 the damage within the North Central Zone approached $1,500,000. Damage to County roads and bridges was estimated at $170,000 by the Army Corps of Engineers. Heavy rainfall was for the most part limited to the Santa Cruz Mountains which comprise the headwaters of streams in the North Central Zone. Estimates of the Corps of Engineers indicate that damages in the North Central Zone were as follows:

Residential property damage	$ 396,700
Agricultural property damage	604,200
Non-residential property damage	224,900
Miscellaneous and emergency aid	203,000
	$ 1,428,800

Evacuation of homes adjacent to creeks in portions of Saratoga, Campbell, Santa Clara and Sunnyvale were ordered during the 1955 flood and this action undoubtedly prevented the loss of several lives.

In the April flood of 1958, damage was not as widespread as in 1955 due mainly to the lower magnitude of the storm and the improved condition of the Calabazas Creek. Damage was further lessened by the fact that large scale creek damage repair and maintenance had been performed during the summer of 1956 and 1957. Some construction work on streams in the North Central Zone had also been completed by the time of the 1958 'Easter' flood. Due to the factors just cited, damages as reported by the Army Corps of Engineers were reduced to $92,000 in the Saratoga Creek Basin and to $97,000 in the San Tomas Aquino Creek Basin. Total damages in the Zone were estimated at $189,000 by the Corps including $34,000 to roads and bridges.

THE NATURE OF THE FLOOD CONTROL PROBLEM

Stated in its simplest terms, the flood control problem consists of transporting runoff from mountainous terrain, where during times of severe storms water falls in greatest abundance, to the bay in such a manner as to cause no damage or a minimum of damage en route. At the outset, it should be clearly understood that a flood control or flood protection program should not be construed as a panacea which will insure against all flooding. Storms vary in amount of rainfall, duration, and intensity of rainfall and arrive with little or no advance warning. They vary in size from the meager rain experienced in Santa Clara County during the winters of 1956-57 and 1958-59 to the destructive type of storm experienced during the 'Christmas Flood' of 1955 and the 'Easter Flood' of April 1958. It seems certain that no matter how much flood protection is given to any area, there is a probability that some day a storm will occur which exceeds the capacity of the works which have been built. There are, however, accepted criteria which serve as a desirable guide in determining the amount of protection to be provided by a public agency when establishing a flood control or flood protection program. Storms are generally referred to as ten-year storms, twenty-year storms, fifty-year storms, one hundred-year storms, etc. These designations have reference to the frequency with which storms of certain magnitudes occur. Thus, a one hundred-year storm is one which, it is estimated, will be exceeded in magnitude on the average of once every hundred years. A fifty-year storm is estimated to occur on an average of once every fifty years. The designations refer to estimated times of recurrence and are not to be confused with the relative sizes of the storm. Thus, a one hundred-year storm is not twice as big as a fifty-year storm. In general, a fifty-year storm is approximately 90% of the magnitude of a one hundred-year storm in this area.

The predominantly agricultural North Central Zone is developing rapidly into an urban area and a flood control program which provides protection against storms of the magnitude of a fifty-year storm has been selected as a program which provides a reasonable degree of protection at a reasonable cost. When storms of greater magnitude occur, some damage is inevitable, but flooding should generally be of minor consequence and the expenditure of additional funds to protect against rarer storms is not considered to be warranted. The protective works shown on the plans in this report have been formulated in accordance with these general principles except that the Sunnyvale Outfalls have been sized to contain runoff occurring on the average of once every ten years. This capacity in the Sunnyvale Outfalls is regarded as adequate for such a type of installation since the outfalls are essentially storm drainage facilities rather than flood control facilities.

PROBLEMS CONNECTED WITH FLOOD CONTROL

In general, it can be stated that the residential, commercial and industrial development will significantly increase the runoff as compared to the same area of ground in its natural condition.

The increasing intensive urban development of the North Central Zone is one of the most important contributing factors to the flood control problem in this area. While land is in its natural condition, or has been cultivated into orchards, it will absorb a substantial quantity of rainfall. Even after such ground has become saturated and can no longer absorb water, the rate at which the resulting runoff finds its way into a flood control channel is relatively slow. The flood water flows across orchards and meadows and the cultivated ground or the grass of a meadow has a tendency to slow the rate at which the water is traveling. As urbanization occurs, the contrary is true. Instead of open land to absorb rainfall, the change in land use provides rooftops, driveways, streets, commercial areas, parking lots and other areas that are relatively impervious, and the land can no longer absorb as much rainfall. Urban developments are usually designed so that the flood waters quickly drain off the property into the public streets and thence into storm drainage facilities. Storm drains, unlike cultivated orchards or meadows, transmit runoff to the nearest flood control channel at the fastest rate compatible with good engineering design.

Aside from the usual problem of inadequate channel capacity, there are also the related problems of erosion and silting which must be considered in every proper flood protection program. As rain which falls on a hillside proceeds on its course to the sea, the following things are likely to occur: first, flood waters, like most natural substances, rush with greater speed downhill on a steeper grade. Therefore, when the rain falls in the mountains the runoff rapidly traverses the steep hillside, washing away natural soils along with dust and silt that has gathered over a dry summer and fall. Since it is traveling at a relatively high rate, it has a tendency to scour or erode. As the tributaries of a stream reach the main channel or outfall, a greater volume of water has gathered. Flood waters traveling at a high rate in combination with volume create a greater force, which will continue to erode within the channel itself. This is particularly true where soils are loose or gravelly. These silts and gravels are carried downstream toward the floor of the valley and as the slope flattens the speed of the water slows down. Having lost its velocity the water loses its ability to carry much of this silt and gravel and the material is deposited in the bed of the stream in the flatter reaches. Similar deposition of silts and gravels occurs at each obstruction, such as at culverts or sharp turns in the bed of the creek which causes a reduction in the rate of travel of the water. In the case of an inadequate channel the water then leaves the channel and carries its debris and silt onto adjoining land. In the North Central Zone many of the streams are thus on high ground so that when the stream leaves its natural course it cannot return, and thus forms ponds or cuts damaging channels through fertile soils. As the water approaches the bay, the problems of subsidence and tidal action are encountered. Although the floor of Santa Clara Valley is subsiding at the south end of San Francisco Bay, the tides, of course, remain at a constant level (within their tide cycles). It is necessary, of course, to discharge the flood waters safely into the bay at a high as well as at a low tide.

METHODS OF CORRECTING EROSION

There are many methods of solving the erosion problem. All of them have advantages and disadvantages. One of the best methods of preventing erosion is to construct a reinforced concrete channel section. Concrete lining is the obvious method of preventing erosion and has the advantage of reducing future channel maintenance costs. The disadvantages are high cost and the elimination of any possibility of percolation within stream beds. Another method is to use drop structures or check dams. Drop structures or check dams have the effect of changing the grade of the stream bed by flattening the slope between structures with the structure itself acting as a spillway or waterfall within the stream channel. With the flatter slope between drop structures, erosion is minimized. In some cases it is necessary to place drop structures in wholly concrete-lined channels due to the fact that the speed of the water will, in the absence of drop structures, be capable of damaging even the concrete lining.

It is sometimes thought desirable to straighten channels that have a winding course. However, when such a channel is straightened, such straightening will have the effect of increasing the slope of the channel, thus creating an erosion problem. Therefore, in the absence of sharp turns which would cause bottlenecks, it is sometimes desirable to refrain from channel straightening and shortening.

After considering the above problems, the Board of Supervisors of the Santa Clara County Flood Control and Water Conservation District adopted the following policies in connection with construction of major flood control facilities:

1. Pending availability of funds for channel lining, unlined channels will be constructed.

2. When funds are available, lined channels are preferred over unlined channels, and lining will be provided except in those areas where lining would adversely affect the percolation of water.

3. Drop structures are preferred over lining to control velocity and erosion whenever costs are comparable.

4. In channel reaches containing possible erosive velocity but having reasonable alignment and adequate cross section, the natural alignment of the watercourse is preferred over channel realignment.

METHODS OF CORRECTING SILTING

Proper erosion control as outlined above will prevent a major portion of the silting of channels in their downstream reaches. However, it is impossible to prevent channel silting completely. The only feasible method to maintain proper channel capacity is to remove the silt at periodic intervals. In most cases this will be accomplished by the maintenance forces of the Department of Public Works of the County of Santa Clara, and, in other cases, by the use of rented equipment obtained from private contractors.

MAINTENANCE

Proper maintenance of all flood control facilities is of vital importance to any flood protection program. In addition to the silting problem explained in previous portions of this report, streams become clogged by natural growth and the deposits of rubbish. Such foreign substances are commonly known to all. They consist of lawn clippings, garbage, unwanted wood, unwanted bed springs, washing machines or any other forms of refuse that people will throw into a creek bed rather than transport it to a public dump.

In order to prevent such unauthorized action, the Board of Supervisors of the Santa Clara County Flood Control and Water Conservation District has adopted Ordinance No. 59-1, which makes it illegal to throw any refuse of any type or nature into a District-constructed or natural channel. Violators are subject to fine or imprisonment. By the terms of such Ordinance, those private persons owning property that creeks run through are required to reasonably maintain them so that such creeks will not retard the flow of water. It is anticipated, however, that as the years go by the Santa Clara County Flood Control and Water Conservation District will acquire property rights in all such natural watercourses, and, when such rights are acquired, the District, being the owner of such stream channels, will maintain them. In addition to enforcing the abovementioned Ordinance, channel maintenance is accomplished in one of the following ways:

(a) Silt removal
(b) Snagging and clearing of tree and shrubbery growth within the channels
(c) Clearance of debris
(d) Erosion control to prevent silting

Where natural streams have adequate capacity and do not need construction projects, it is proposed that erosion be controlled by sack revetment, deposit of heavy materials along the banks of the channels, planting of protective grasses, or, if necessary, the installation of drop structures. Natural growth would be controlled either by mechanical or manual removal as it occurs, or, where possible, the prevention of such growth would be accomplished by the use of chemicals. In the case of chemicals, they will be used only after consultation with the County Agricultural Department so as to insure that no harm will come to adjoining properties. Silt removal will, of course, necessitate the periodic use of heavy equipment.

TIDAL AND SUBSIDENCE PROBLEMS

The pressing need for proper flood control works within Santa Clara County precludes waiting for the construction of large and very expensive tidal control facilities. It therefore becomes necessary to construct levees in the lower reaches of all streams which will be sufficiently high to contain a peak flood within the levees if such a flood occurs during a time of high tide.

Coupled with high tides and the problems which they cause in obstructing the free outflow of flood waters into the Bay is the problem of winds during the flood-producing storms. These winds can cause a build-up of bay waters over and above that of high tide. This condition must be considered when tidal influences are computed along stream channels and levees must be constructed to prevent overtopping.

The higher a levee is constructed, the broader its base must be.

Therefore, in a proper flood protection program wherein the problems of tidal action and subsidence are encountered, as they are in Santa Clara County, it is necessary to acquire sufficient rights of way so that levees can be raised in the future to equalize the amount of subsidence; the wider rights of way being necessary to accommodate the broader bases of the future higher levees.

PROJECTED DEVELOPMENT

A study recently completed by the County Planning Department, indicates that development in the North Central Zone as projected to 1985, will have the following characteristics:

The hillside area in the vicinity of Los Gatos, Monte Sereno and Saratoga will have a low density residential aspect of less than two families per acre. North from the base of the hills to Prospect Road and the Vasona Branch of the Southern Pacific Railroad, a density of three to six families per acre is predicted. From the last mentioned boundary to the Southern Pacific Main Branch north of El Camino Real, it is predicted that average density will rise to a point between seven and ten families per acre. In scattered areas in the vicinity of Sunnyvale and Cupertino, apartment projects are predicted that will have a density of eleven to twenty families per acre. These high density scattered areas, it is predicted, will cover about 10% of the total residential area.

It is predicted that Sunnyvale will be the major population center with the Cupertino-Monta Vista area ranking second.

The predicted highest density areas are those that have the greatest problems for the disposal of local runoff. The major flood plain of the North Central Zone, which is bounded roughly by Pollard Road on the south, San Tomas Aquino Creek on the east, Kifer Road on the north, and Saratoga Creek on the west, is predicted to be developed into residential area of a lower density - which generally means single family dwellings. Such dwellings are more susceptible to flood damage than high rise apartments and industrial-commercial areas.

The County Planning Department Study indicates that an industrial center will probably develop in an area of about one square mile along the Vasona Branch of the Southern Pacific Railroad in the Monta Vista-Cupertino area. Another of about the same area is predicted between the future Junipero Serra Freeway and Homestead Road immediately south of Sunnyvale. Then there is the massive scattered industrial area in the Sunnyvale region which spreads over the entire width of the Zone and runs from El Camino Real to the Bay. Although the North Central Zone was not segregated in the Planning Department study, it appears that the ratio between residences and existing and potential industrial development in the northerly part of the North Central Zone is lower than the usual ratio. This would indicate, therefore, that the future tax base in the North Central Zone will be higher because of greater industrial development than possibly any other area in the County.

The estimated developmental expansion in the North Central Zone, as given by the County Planning Department, therefore underscores the conservatism of the projection of estimated assessed valuation, as shown in Table 3. The current assessed valuation is over $305,000,000 and has been projected by descending percentage increments to the fiscal year 1997-98 when it is estimated at about $1,862,000,000.

ZONE DESCRIPTION

The North Central Zone has an area of approximately 80 square miles and embraces the watersheds of the Calabazas, Saratoga and San Tomas Aquino Creeks and their respective tributaries, and an area in the Sunnyvale-Moffett Field region not now served by any defined stream or channel.

The mountainous area within the zone comprises approximately 19 square miles. The steep mountain slopes in general include the area between base of the hills and the "Skyline" Ridge, which has a maximum elevation of 3,214 feet. The valley area of 61 square miles is an alluvial plain that slopes in a more or less northeasterly direction from an elevation of approximately 400 feet at the base of the hills to minus 3 feet immediately south of the salt-evaporating pond levees which ring the southern end of San Francisco Bay.

Early in the 20th century industrial and agricultural interests built a series of levees on the South Bay frontage from Mayfield Slough north of Palo Alto to Steamboat Slough at Alviso. These levees were built to form salt evaporation ponds and to reclaim inundated lands for farming.

In building the levees, much land was thus reclaimed by making it no longer subject to inundation by the daily tidal action of San Francisco Bay. However, in the process of constructing the levees, five major outlets for winter runoff were dammed off, causing diversion and ponding of the waters from seven creeks and the Guadalupe River.

Among the major outlets which was cut off from its original function of carrying off flood waters was Guadalupe Slough, which was the outlet for all of the creeks in the North Central Zone as well as a supplementary outlet for the Guadalupe River. Guadalupe Slough has since been reopened to form an outfall for the three major creeks of the North Central Zone, thus reserving Steamboat Slough exclusively for the outfall of the Guadalupe River.

Guadalupe Slough was reopened by dredging through the salt-evaporating ponds as a part of the Calabazas Creek Project constructed in 1958. Calabazas Creek itself has been brought up to project flood capacity on a new alignment which runs almost due north from its crossing of El Camino Real to the new connection to Guadalupe Slough. Sunnyvale West Outfall first stage construction during 1959 and 1960 has provided an opening into Agnew Canal at the Sunnyvale Sewer Treatment Plant. These openings will provide a sufficient number of outfalls to San Francisco Bay for flood waters from the North Central Zone.

Detailed engineering characteristics such as area-elevation curves and slope-frequency curves for the North Central Zone are shown on Plates 91 and 92. Inspection of these Plates reveals that the bulk of the Saratoga Creek watershed lies in mountainous terrain abutting Skyline Drive and the high-rainfall area of the adjacent San Lorenzo River Basin. The Saratoga Creek watershed cuts off the San Tomas Aquino and Calabazas Creek watersheds from the area of high precipitation and these factors combine to make Saratoga Creek the heaviest contributor of flood waters in the North Central Zone.

BASIC CRITERIA

Basic criteria which materially affect the actual future cost of construction have been established as a part of this report and the preparation of preliminary plans in order to provide a firm basis for estimating construction costs of the projects which are proposed. In addition to the problems of channel capacity, erosion, subsidence and the effect of tides, there are other basic problems which must also be kept in mind. These problems include the selection of efficient channel depths and alignment, access for maintenance and possible severance damages to property owners. Therefore, in developing a program which will provide proper flood control for a watershed, channel improvements for the main channels are planned with the following general factors in mind:

1. Provide a waterway which will minimize erosion and be of adequate capacity to carry the runoff from fully developed land during the selected design storm.

2. Provide a final alignment and capacity to fit the future development pattern of the area, and also to cause a minimum of property severance along the route of the stream. The lands, rights of way and easements, and property which will be injured or required to provide for the channels, conduits, levees and access will be of widths specified and shown on the accompanying plans.

3. Provide a means of ready access to the channel so that emergency and maintenance crews can take care of any eventuality.

4. Design improvements within the economic limits reached when initial construction costs are balanced against future anticipated maintenance expense.

5. Provide channels of sufficient depth to accomodate future storm drains from remote areas of the basin.

6. Provide fencing where necessary to give adequate protection to the public.

7. Perform all work in accordance with generally accepted construction practices. General specifications for all excavation, pipe, reinforced concrete structures and miscellaneous construction shall be according to 'District' and Santa Clara County standards and the applicable provisions of the "Standard Specifications of the State of California, Department of Public Works, Division of Highways".

Specific criteria for the proposed main channel improvements contained in this report are shown on Table 4.

Application of the selected criteria and completion of the hydrologic analysis produces the project flood flows as shown on Plate 93.

A representative project hydrograph is shown on Plate 90. Hydrograph shapes for the North Central Zone are based upon the recorded hydrograph shape for the U.S.G.S. gaging station on the Saratoga Creek near Saratoga.

PROPOSED IMPROVEMENTS

During the investigations for the projects proposed in this report many alternatives for flood control protection were considered. Determinations were made regarding the feasibility of channel alignment, the feasibility of channel lining for costing purposes and the relative costs of modifying existing structures or replacing them. Alignment changes have been minimized and changes were made only where:

a. The overall cost of additional rights of way and construction was considered to be less than improvements through restricted areas on the existing alignment.

b. Future development adjacent to the creek could be improved by a less irregular alignment.

Table 1 is a summary of the major improvements proposed on each project of this report. It supplements the detailed information shown in the accompanying plans. Plates 1 through 89 are a pictorial description of the land, right of way, easements and property proposed to be taken, acquired or injured in carrying out this work, and show the work proposed to be done.

Special attention has been given to certain phases of the proposed improvements so that there will be only a minimum of disturbance to existing land uses. Public safety will be maintained or enhanced, and the aesthetic characteristics of natural channels will remain. On all projects farm bridges will be replaced so that agricultural operations can continue pending development. Fences will be provided at all crossings of public roads, on concrete-lined and artificial channels, and presently developed residential areas where necessary to provide safety. In areas where fencing would destroy aesthetic features of the natural channels, fences will be installed only where there is mutual agreement between the District and the property owners in the neighborhood.

Natural beauty on certain reaches of five of the projects will be preserved by limiting improvements to maintenance of the existing channels. Structural work to prevent erosion of properties adjacent to the channels, usually in the form of drop structures, will only be installed as the danger spots become apparent. The reaches wherein special attention will be given to preserve aesthetic values are:

1. Saratoga Creek - from south of Fourth Street, Saratoga, to Bollinger Road, (Project 3, Plates 14 through 18).

2. Wildcat Creek (both branches) - from the Saratoga-Los Gatos Road to the confluence of the two branches north of Douglas Avenue, (Project 8, Plates 52 and 55).

3. San Tomas Aquino Creek - from Bainter Avenue to Southern Pacific Railroad tracks, (Project 20, Plates 85 through 87).

4. Regnart Creek - from Lindy Lane to Stelling Road, (Project 5, Plate 24).

5. Rodeo Creek - from Southern Pacific Railroad track to Sunnyvale-Saratoga Road (Project 15, Plates 69 through 71).

In addition to the channel improvement and maintenance as shown on the plans accompanying this report, all other natural channels in the Zone will be maintained in accordance with the adopted policies of the Board of Supervisors of the District.

Special mention should also be made as to the proposed plans for handling the flood flows in the lower reaches of the Saratoga Creek. Presently a portion of the flows of Saratoga Creek are diverted into the San Tomas Aquino Creek between El Camino Real and Bayshore Highway. The balance of the flood waters continue in the old Saratoga Creek channel across Bayshore Highway and again reach San Tomas Aquino Creek. The proposed plan will divert all waters of Saratoga Creek into San Tomas Aquino Creek at the present point of partial diversion, approximately 3,800 feet north of El Camino Real. However, there are several drainage facilities now discharging into the Saratoga Creek downstream from this point. It will, therefore, be necessary to maintain the lower portion of Saratoga Creek as a flood control facility. Backfilling of any portion of the creek will be done only under permission so that there will always remain adequate capacity for flood control and drainage in the lower portion of the Saratoga Creek.

Reasonable financing of the improvements proposed in this report requires the spreading of bond sales over a period of years. Any staging of the sale of flood control bonds requires a construction program which similarly must be spread over a reasonable period of years.

Recommended construction staging is based upon the concept that adequate channel outlets should be constructed prior to intensive upstream improvements and that work proceed from the downstream end upstream. However, this basic idea must give way to a more important concept that the worst potential flood damage should be minimized first. The Citizens' Advisory Committee of the North Central Zone should establish priorities based upon the factors just mentioned. Unforeseen development trends may require a modification of any established priority and' review of recommended priorities must be a continued function. Based upon the sale of bonds as shown in Table 3, a five-year construction period would eliminate the worst danger areas with the lower priority projects to be handled in the sixth, seventh and eighth years.

ESTIMATED COSTS

Table 2 shows the tabulated cost estimates of the twelve projects proposed in this report. Construction costs have been adjusted to reflect anticipated inflated project costs in the actual future year in which the construction will be completed. The figures appearing in the contingency column contain the total of estimated costs for engineering, construction inspection, legal fees, advertising, etc. Right of way costs are based on present land values with a slight inflation increment. This latter column also includes estimated costs of right of way acquisition in addition to the actual price to be paid for the land. If financing becomes available through a bond election, and the State of California is thus assured that construction of the Junipero Serra Canal will go forward, the State will contribute approximately 45% of the project construction costs of that project.

ECONOMIC JUSTIFICATION

The most accurate data available on flood damages in the North Central Zone covers the period from 1955 to 1960. If the estimated $1,617,800 flood damages within the Zone during the period 1955-1960 were assumed to occur during 1983-1987 (the five-year center of the fifty-year project life when the estimated assessed valuation of the Zone will be much higher), the average annual flood damages would be approximately $1,330,000 per year. Assuming that a bond issue for $12,750,000 is successful and is marketed as recommended, the average annual cost of the proposed improvements over fifty years would be approximately $400,000. This indicates that the proposed improvements might have a benefit-cost ratio in the vicinity of 3.3:1 or that the benefits of the program definitely exceed the estimated costs of the program. Stated differently, for each dollar of cost, 3.3 dollars in damages should be prevented.

Because detailed flood damage figures are not available, the benefits resulting from the proposed program can only be stated in general terms. On this basis, the improvements proposed in this report would be of benefit to Zone NC-1 in the following manner:

1. Public property, including city and County roads, public school property, State highways, Federally-owned property and other publicly-owned installations such as Agnew State Hospital, would be free from flood hazards and inundation such as experienced in 1955 and 1958.

2. Privately-owned property would receive the same benefits.

3. Development of presently undeveloped areas would no longer be curtailed. The proposed channels have been designed to carry increased runoff from the areas in which complete urbanization is anticipated, in addition to the runoff from undeveloped areas, during flood periods.

4. Economic benefits will result in the entire zone. By reducing or eliminating the threat of flood to lands presently subject to such hazards, the land becomes available for higher uses and land value automatically increases. Present trends indicate that Santa Clara Valley will become one of the nation's great centers for residential, commercial and industrial activity which will in turn maintain employment and business activity to produce a sound economy. The failure to provide adequate flood control will retard such orderly development. However, if given proper protection from floods, development will continue and the increase in assessed valuation created by the addition of structural improvements to land will be substantial. This will, as shown hereinafter, provide a tax base of sufficient volume to allow the work proposed in this report to be economically financed at an annual cost less than the taxpayers of the North Central Zone are presently paying.

FINANCING

The present combined District and Zone tax rate in the North Central Zone is 25 cents per $100 assessed valuation. If the $12,750,000 bond issue proposed in this report is approved, the retirement tax rate in the initial year would be 15 cents per $100 assessed valuation. The estimated tax rate to retire the recommended bonds is shown on Table 3. An additional 5 cents per $100 is needed for District administration, maintenance and pay-as-you-go projects, making a total of a maximum of 20 cents per

$100 assessed valuation. This amounts to a reduction of 5 cents per $100 under the present tax rate. As assessed valuation rises, which is indicated in the conservative estimates in Table 3, the tax rate would be reduced.

CONCLUSIONS AND RECOMMENDATIONS

The North Central Zone embraces 80 square miles in the very heart of the Santa Clara Valley. The major portion of Monte Sereno, almost all of Sunnyvale, and large portions of Los Gatos, Campbell, Cupertino, Santa Clara, San Jose and Saratoga lie within the boundaries of the Zone.

Historical flooding from the streams in the North Central Zone, projected into the future, indicate a very real potential hazard, and the economic stability of the Cities named above (as well as that of the unincorporated areas) is threatened.

Studies made by the County Planning Department indicate that this Zone will have over a 150% increase in population and will be one of the most heavily industrialized sections in the County by 1985.

The provisions of this report show the proposed program to be one which will correct the existing and future flood problems of the North Central Zone on the channels to be improved. The existing flooding within the Zone is not only a constant menace, but, as shown by the financial analysis, it is entirely unnecessary.

The tax rate to finance the $12,750,000 in flood control improvements and other pay-as-you-go projects needed in this Zone will have an upper limit at least 5 cents less than the present rate.

Under the financing method and construction program resulting therefrom 80% of the needed flood control works can be constructed in five years, and the remaining lower priority projects can be completed in the following three years. If a pay-as-you-go method is used, at the present rate of 25 cents per $100 of assessed valuation, the projects would not be completed for twenty to thirty years.

With the information as to the economic feasibility of the flood control program and the description of the necessary works for the North Central Zone made available in this report, it is possible for all civic-minded individuals and organizations to advocate the passage of a bond issue in this Zone and thus share in its continued economic stability.

It is recommended that the Board of Supervisors of the Santa Clara

County Flood Control and Water Conservation District hold a public hearing on the improvements proposed in this report in order to obtain public approval as required by law.

It is recommended that the Board of Supervisors call for a bond election in the amount of $12,750,000 for flood control improvements in the North Central Zone.

It is recommended that bonds be sold in accordance with the proposed schedule contained in this report.

It is recommended that the proposed improvements be staged for construction in accordance with the priority list contained in this report subject to a continuing review to ensure that the priority list conforms to changing development patterns.

Regardless of the outcome of the recommended bond issue, it is further recommended that the Board of Supervisors order the preparation of construction plans and specifications for projects described in this report and order that the described improvements be installed on a pay-as-you-go basis with a proper tax rate.

TABLE 1

SUMMARY OF IMPROVEMENTS

PROJ. NO.	CREEK NAME	MILES OF EARTH CHANNEL	MILES OF CONCRETE LINED CHANNEL	MILES OF ABANDONED CHANNEL	CHECK DAMS & DROP STRUCTURES	NEW STRUCTURES	MODIFY EXISTING STRUCTURES	NO. OF MAJOR UTILITY RELOCATIONS
2	San Tomas Aquino (Wildcat to Bay)	8.2	4.2	1.6	35	19	8	22
3	Saratoga	9.1	0.2	0.8	43	3	7	7
5	Regnart	2.5	0.0	0.7	16	0	3	0
6	Sunnyvale East	6.6	0.5	0.0	8	12	0	5
7	Sunnyvale West	0.6	0.0	0.0	2	0	0	0
8	Wildcat (2 Branches)	3.5	0.2	0.2	18	6	1	2
10	Calabazas	6.5	0.1	0.7	23	7	5	3
15	Rodeo	2.2	0.1	0.3	4	2	3	1
16	Smith (2 Branches)	1.2	0.2	0.4	0	9	1	0
20	Upper San Tomas	3.3	0.0	0.0	26	7	5	5
21	Vasona	0.4	0.0	negl.	2	1	1	4
24	Junipero Serra Channel	1.0	1.7	0.0	0	3	0	0
	Total	45.1	7.2	4.7	177	69	34	49

TABLE 2

PROJECT COSTS

PROJ. NO.	PROJECT NAME	CONSTRUCTION COSTS	CONTINGENCIES	RIGHT OF WAY COSTS	TOTAL
2	San Tomas Aquino Creek (Lower)	$ 3,740,700	$ 761,100	$ 1,116,000	$ 5,617,800
3	Saratoga Creek	1,244,900	249,000	335,300	1,829,200
5	Regnart Creek	130,910	26,180	58,000	215,090
6	Sunnyvale East	1,270,000	254,000	436,970	1,960,970
7	Sunnyvale West	90,000	8,500	52,000	150,500
8	Wildcat Creek	274,200	54,800	107,500	436,500
10	Calabazas Creek	701,200	140,200	323,400	1,164,800
15	Rodeo Creek	321,990	64,400	37,600	423,990
16	Smith Creek	373,040	74,610	84,000	531,650
20	San Tomas Aquino Creek (Upper)	77,200	15,400	10,400	103,000
21	Vasona Creek	38,300	7,700	16,000	62,000
24	Junipero Serra Channel	149,830	29,900	74,770	254,500*
	Totals	$ 8,412,270	$ 1,685,790	$ 2,651,940	$12,750,000

* Amount of estimated State Highway contribution has been deducted.

Note: Incidental costs are included in Contingencies.

TABLE 3

PROPOSED BOND SCHEDULE - $ 12,750,000
THIRTY YEAR BONDS - FOUR PERCENT INTEREST

FISCAL YEAR	ESTIMATED ASSESSED VALUATION	PROPOSED BOND SALES		TOTAL DEBT SERVICE	ESTIMATED TAX RATE
		JULY	AMOUNT		
1960-61	305,057,340				
	329,460,000	1961	3,000,000	445,000	.136
	355,810,000	1962	3,000,000	502,000	.142
	384,270,000	1963	2,250,000	556,000	.145
	415,010,000	1964	1,000,000	611,000	.148
1965-66	448,210,000	1965	1,000,000	665,000	.149
	479,580,000	1966	1,000,000	718,000	.150
	513,150,000	1967	1,000,000	770,000	.150
	549,070,000	1968	500,000	801,000	.146
	587,500,000			786,000	.134
1970-71	628,620,000			771,000	.123
	666,330,000			756,000	.114
	706,300,000			741,000	.105
	748,670,000			726,000	.097
	793,590,000			711,000	.090
1975-76	841,200,000			696,000	.083
	883,260,000			681,000	.078
	927,420,000			666,000	.072
	973,790,000			701,000	.072
	1,022,470,000			684,000	.067
1980-81	1,073,590,000			667,000	.063
	1,116,530,000			650,000	.059
	1,161,190,000			633,000	.055
	1,207,630,000			601,000	.050
	1,255,930,000			609,600	.049
1985-86	1,306,160,000			567,200	.044
	1,345,340,000			575,800	.043
	1,385,700,000			583,400	.043
	1,427,270,000			565,000	.040
	1,470,080,000			546,600	.038
1990-91	1,514,180,000			528,200	.035
	1,559,600,000			459,800	.030
	1,606,380,000			343,400	.022
	1,654,570,000			226,000	.014
	1,704,200,000			167,800	.010
1995-96	1,755,320,000			109,600	.007
	1,807,970,000			55,400	.003
	1,862,200,000			5,200	.001
			12,750,000		

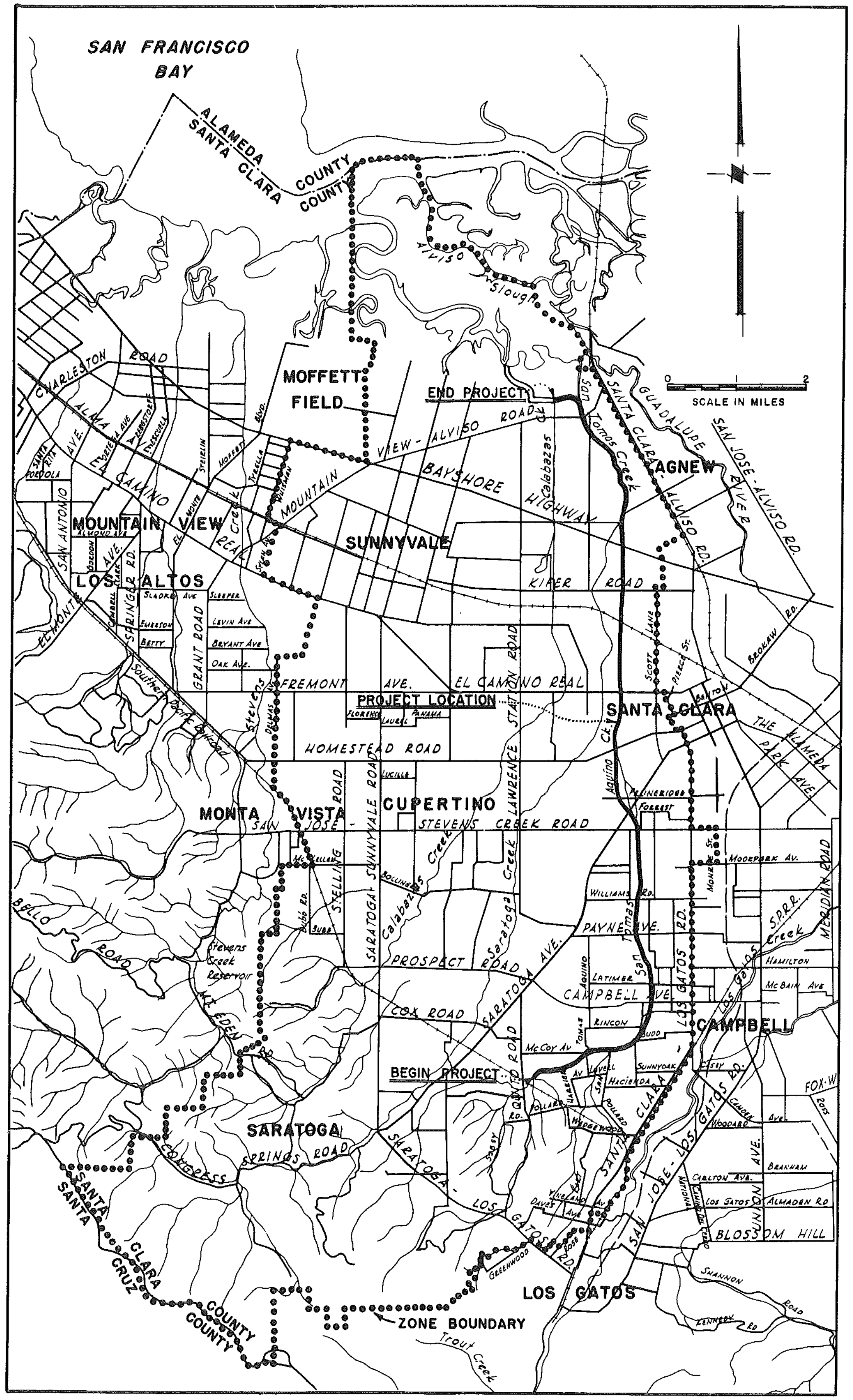
TABLE 4

BASIC CRITERIA

No Backwater at transitions and structures	
Roughness Coefficients (Manning)	
Earth Channels	0.030
Concrete Channels	0.015
Concrete Pipe larger than 24" diameter	0.013
Concrete Pipe less than 24" diameter	0.015
Maximum Velocity	
Earth Channels	8 ft/sec.
Concrete Channels	16 ft/sec.
Channel Freeboard	2 feet
Coincident High Tide (Highest estimated including wind build-up)	8.5 feet 1929 S.L.D.
Basic Hydrologic Data	
Recording rain gage at Rodoni Ranch	District
Recording stream gage at Saratoga Creek near Saratoga	U.S.G.S.
Additional interpretive information	U.S.E.D.

Method of Hydrologic Analysis

Recorded flood hydrographs and standard streamflow routing techniques
Unit hydrographs and synthetic unitgraphs
Watershed correlation techniques
Rational Method using runoff coefficient of 0.40 for ultimate development of residential areas.



MAP AND GENERAL CONSTRUCTION PLANS

OF

ZONE NC-I (NORTH CENTRAL) PROJECT NO. 2

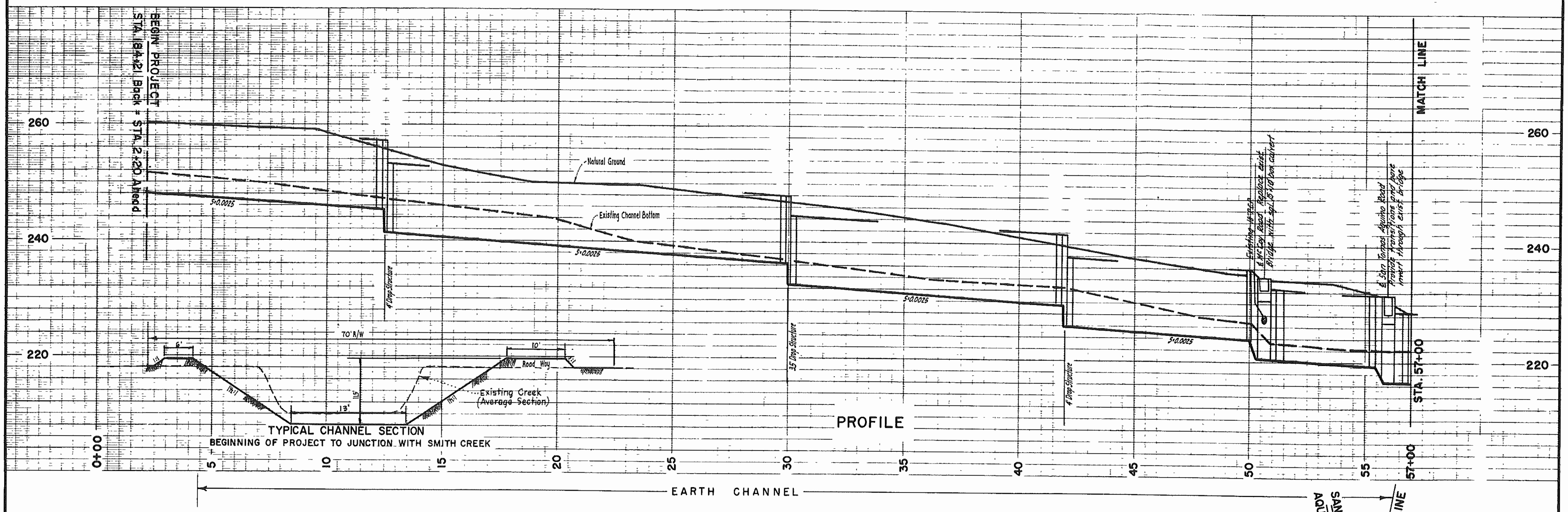
SAN TOMAS AQUINO CREEK IMPROVEMENTS

FROM
WILDCAT CREEK TO CALABAZAS CREEK HOLDING BASIN

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA CLARA COUNTY, CALIFORNIA

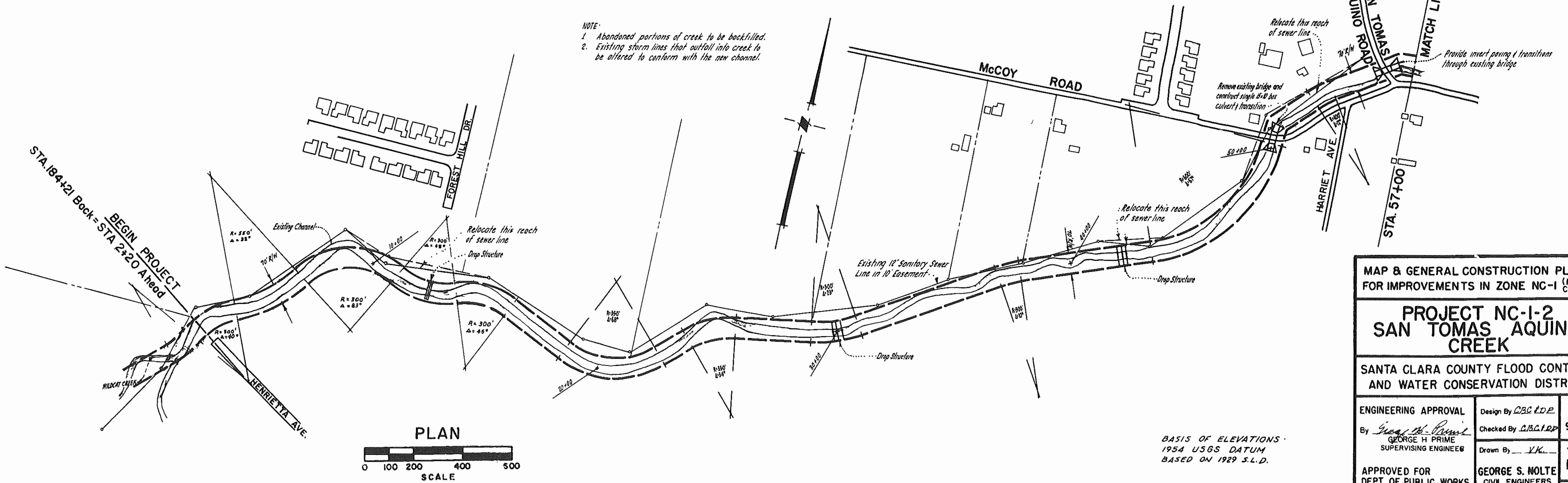
PLATE I


BEGIN PROJECT
STA. 184+21 Back = STA. 2+20 Ahead
MATCH LINE
260
240
220
Natural Ground
Existing Channel Bottom
S=0.0025
4' Drop Structure
3.5' Drop Structure
4' Drop Structure
Existing 10'x10' ℄ McCoy Road Replace exist. Bridge with sgl 15x10 box culvert
℄ San Tomas Aquino Road Provide transitions and pave invert through exist. bridge
STA. 57+00
70' R/W
6'
10'
1:1
1½:1
13'
11.5'
Road Way
Existing Creek (Average Section)
0+00
5
10
15
20
25
30
35
40
45
50
55
57+00
EARTH CHANNEL

TYPICAL CHANNEL SECTION
BEGINNING OF PROJECT TO JUNCTION WITH SMITH CREEK

PROFILE

NOTE:
1. Abandoned portions of creek to be backfilled.
2. Existing storm lines that outfall into creek to be altered to conform with the new channel.


BEGIN PROJECT
STA. 184+21 Back = STA 2+20 Ahead
WILDCAT CREEK
HENRIETTA AVE.
FOREST HILL DR.
Existing Channel
70' R/W
R=550' Δ=32°
R=300' Δ=40°
R=300' Δ=63°
R=300' Δ=45°
R=350' Δ=58°
10+00
20+00
30+00
Relocate this reach of sewer line
Drop Structure
Existing 12" Sanitary Sewer Line in 10' Easement
Drop Structure
Relocate this reach of sewer line
Drop Structure
McCOY ROAD
Remove existing bridge and construct single 15x10 box culvert & transition
Relocate this reach of sewer line
50+00
HARRIET AVE.
SAN TOMAS AQUINO ROAD
70' R/W
MATCH LINE
Provide invert paving & transitions through existing bridge
STA. 57+00
0 100 200 400 500
SCALE

PLAN

BASIS OF ELEVATIONS
1954 USGS DATUM
BASED ON 1929 S.L.D.

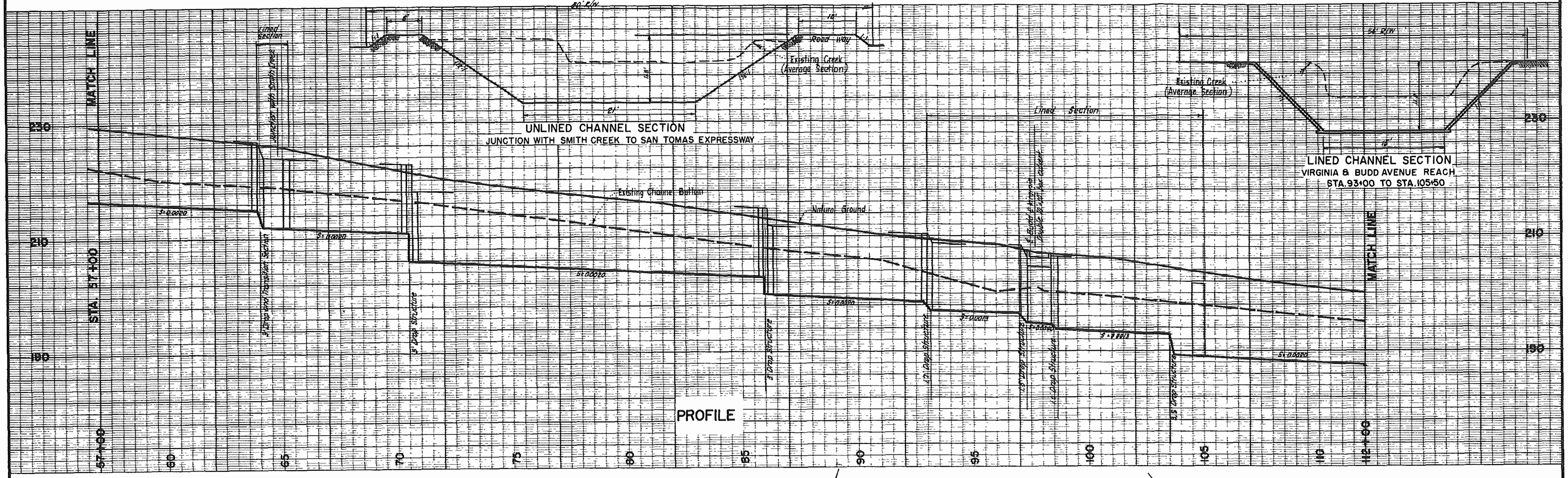
MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

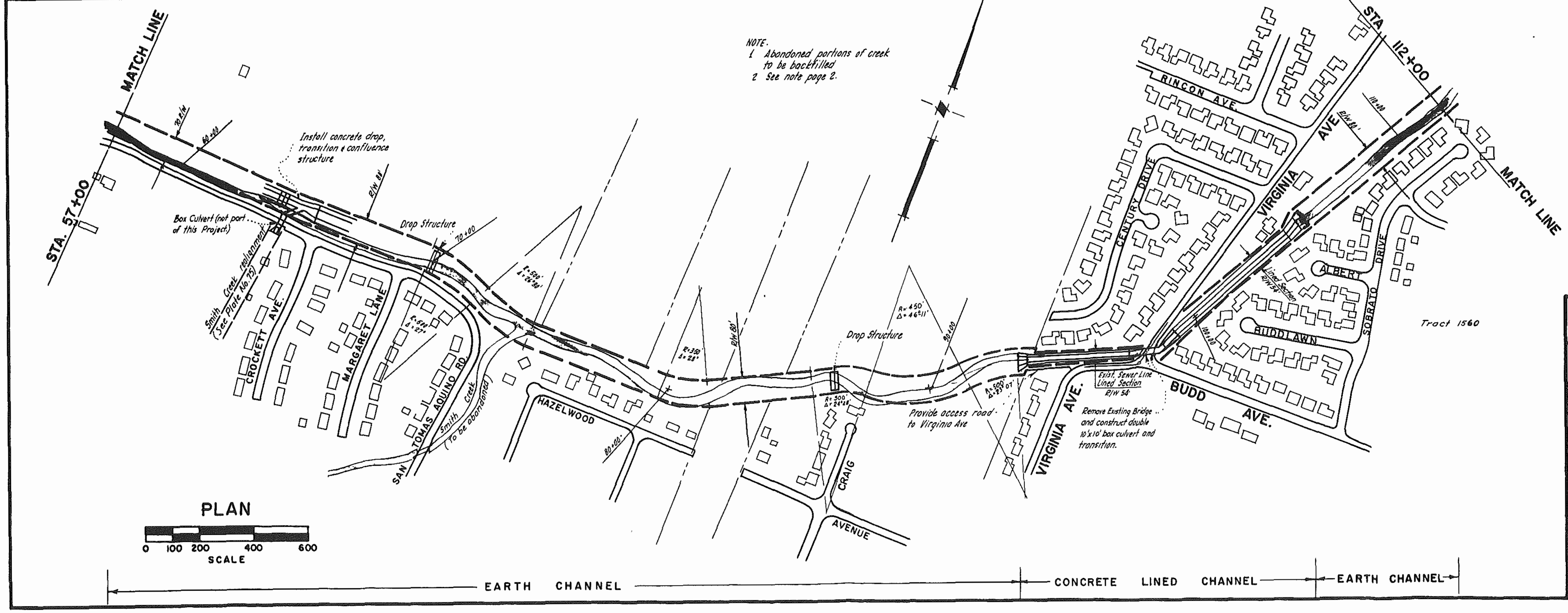
PROJECT NC-1-2
SAN TOMAS AQUINO CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL By Geo. H. Prime GEORGE H PRIME SUPERVISING ENGINEER	Design By CBC &DP Checked By CBC &DP	SCALE: As Shown
	Drawn By V.K.	JOB NO 1315
APPROVED FOR DEPT. OF PUBLIC WORKS By James B. Enochs JAMES B. ENOCHS DIRECTOR	GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF	SHEET 2 OF 12
	Date JAN.3 1961	

PLATE 2





NOTE.
1 Abandoned portions of creek to be backfilled
2 See note page 2.

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-2
SAN TOMAS AQUINO
CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
By George H. Prime
GEORGE H. PRIME
SUPERVISING ENGINEER

APPROVED FOR
DEPT. OF PUBLIC WORKS
By James B. Enochs
JAMES B ENOCHS
DIRECTOR

Design By CBC&DP
Checked By CBC&DP
Drawn By VK

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.

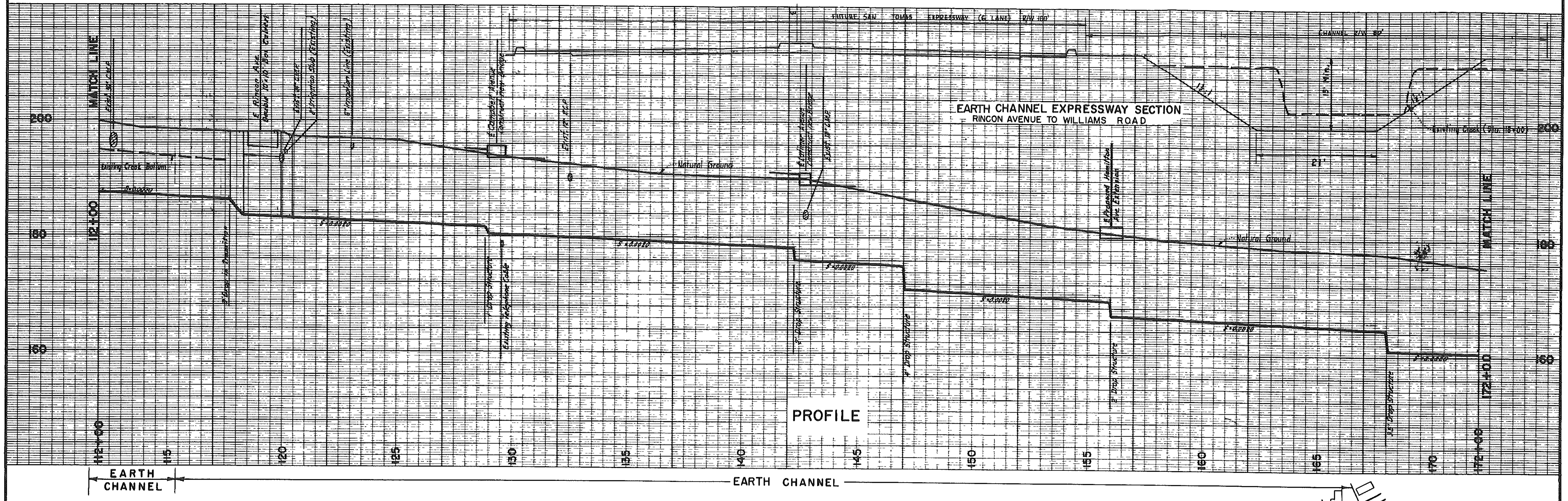
Date JAN 7, 1961

SCALE: As Shown

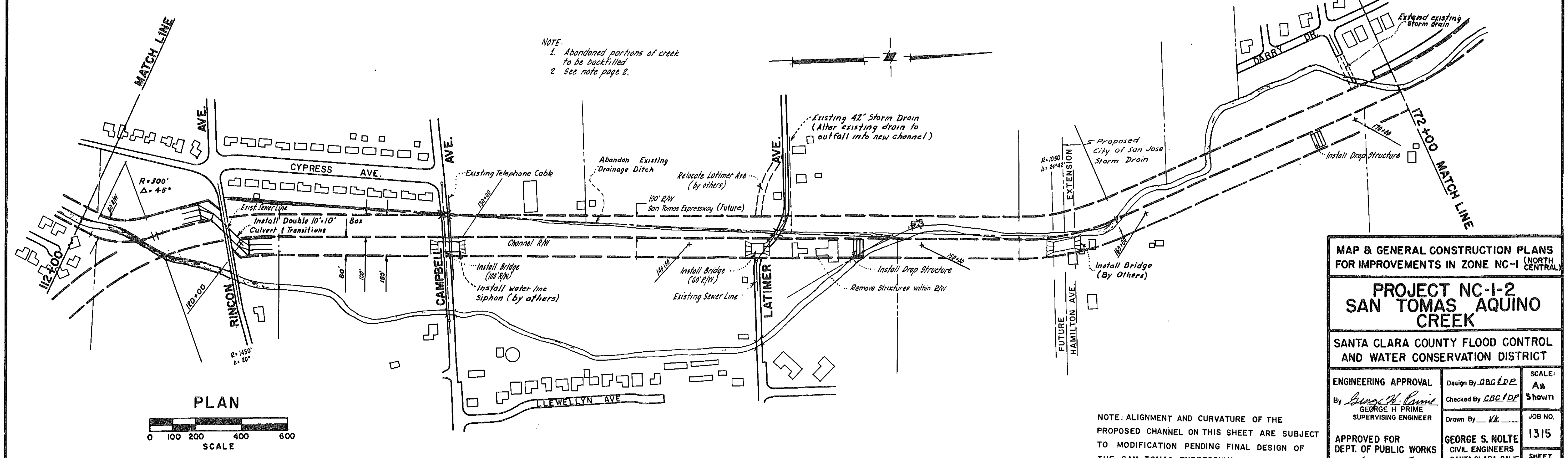
JOB NO 1315

SHEET 3 OF 12

PLATE 3



PROFILE


MATCH LINE
112+00
172+00 MATCH LINE
AVE.
CYPRESS AVE.
R=300'
Δ=45°
R=1450'
Δ=20°
RINCON
CAMPBELL AVE.
LATIMER AVE.
FUTURE HAMILTON AVE. EXTENSION
LLEWELLYN AVE.
DARRY DR.
Exist. Sewer Line
Install Double 10'x10' Box Culvert & Transitions
Existing Telephone Cable
Channel R/W
80'
100'
180'
Install Bridge (100' R/W)
Install water line Siphon (by others)
Abandon Existing Drainage Ditch
100' R/W San Tomas Expressway (Future)
Relocate Latimer Ave. (by others)
Install Bridge (60' R/W)
Existing Sewer Line
Existing 42" Storm Drain (Alter existing drain to outfall into new channel)
Install Drop Structure
Remove Structures within R/W
R=1050
Δ=24°42'
Proposed City of San Jose Storm Drain
Install Bridge (By Others)
Install Drop Structure
Extend existing storm drain
120+00
130+00
140+00
150+00
160+00
170+00
0 100 200 400 600
SCALE

PLAN

NOTE:
1. Abandoned portions of creek to be backfilled
2. See note page 2.

NOTE: ALIGNMENT AND CURVATURE OF THE PROPOSED CHANNEL ON THIS SHEET ARE SUBJECT TO MODIFICATION PENDING FINAL DESIGN OF THE SAN TOMAS EXPRESSWAY

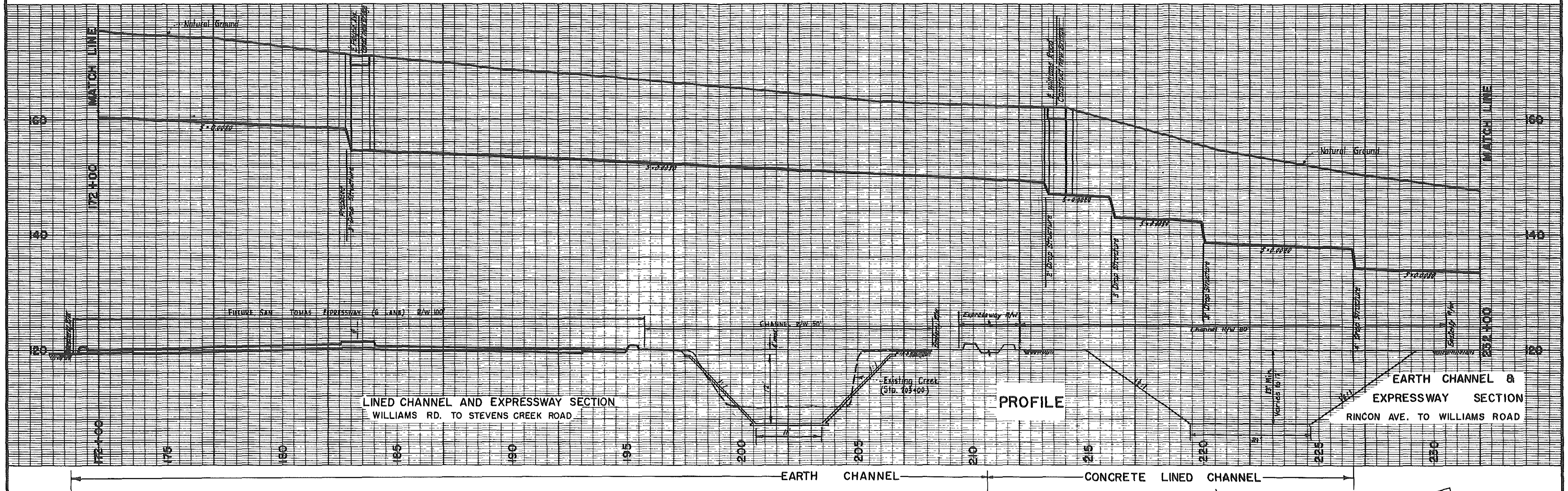
MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-2
SAN TOMAS AQUINO CREEK

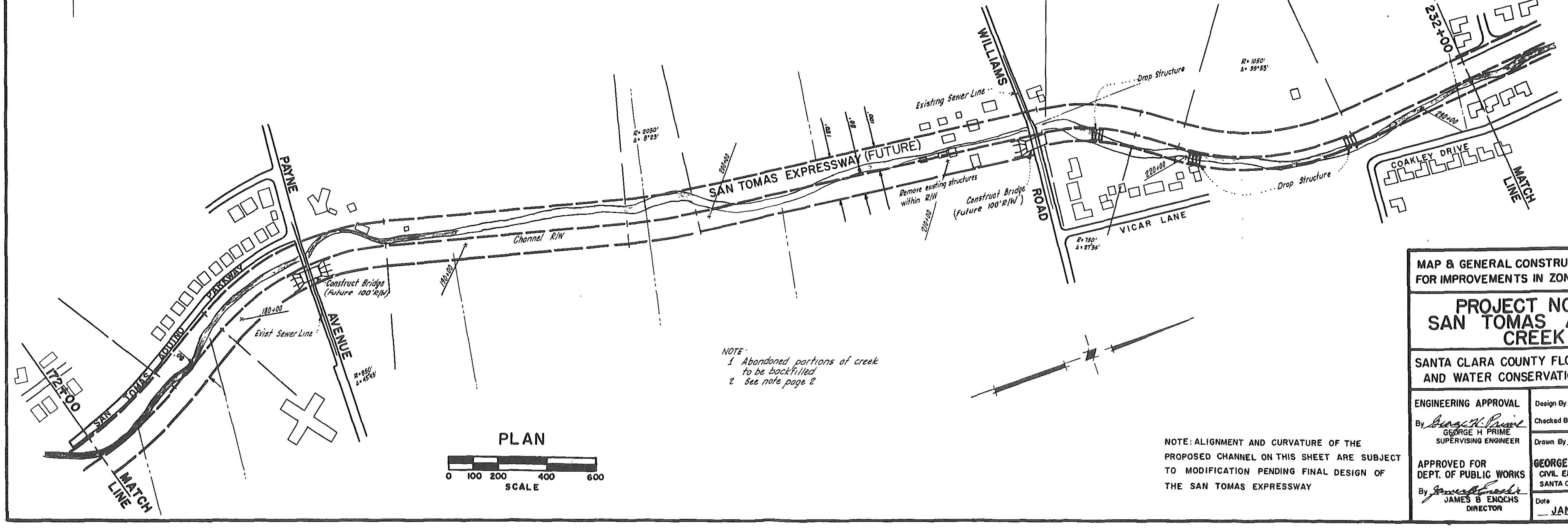
SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL By George H. Prime GEORGE H PRIME SUPERVISING ENGINEER	Design By CBC & DP Checked By CBC & DP	SCALE: As Shown
	Drawn By VK	JOB NO. 1315
APPROVED FOR DEPT. OF PUBLIC WORKS By James B. Enochs JAMES B. ENOCHS DIRECTOR	GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF. Date JAN 7 1961	SHEET 4 OF 12

PLATE 4



PROFILE



PLAN

NOTE:
1 Abondoned portions of creek to be backfilled
2 See note page 2

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MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-2
SAN TOMAS AQUINO CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

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JAMES B ENOCHS
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Checked By CBC&DP
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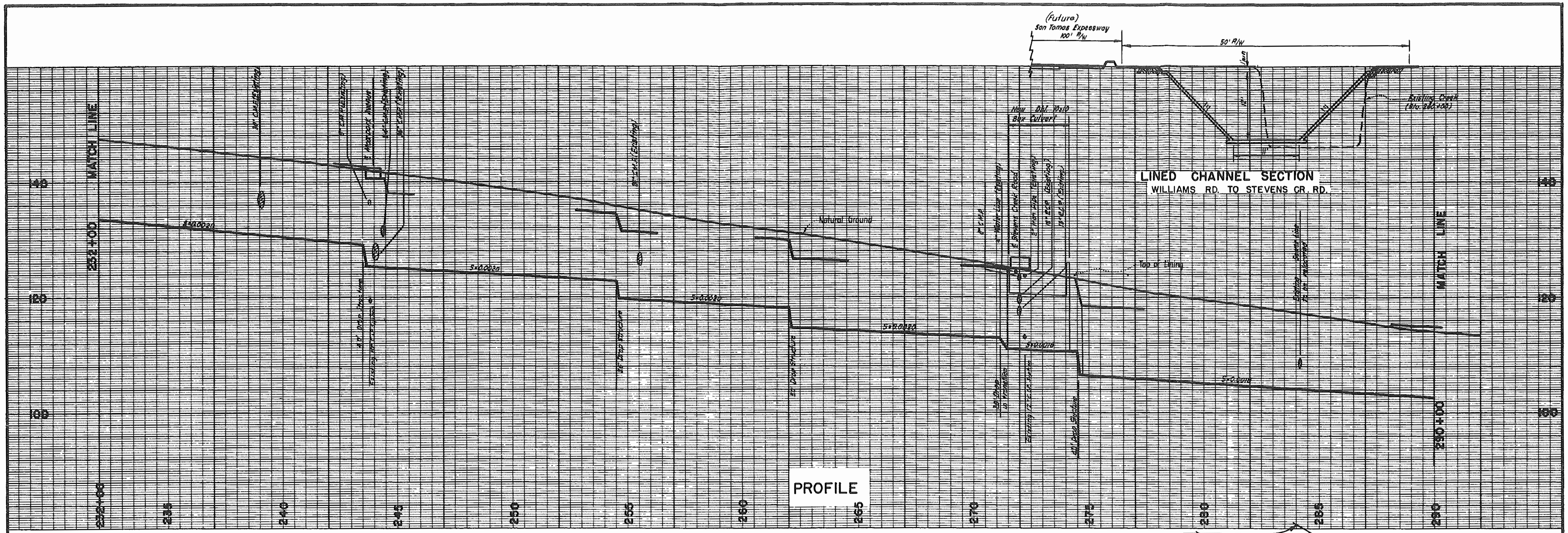
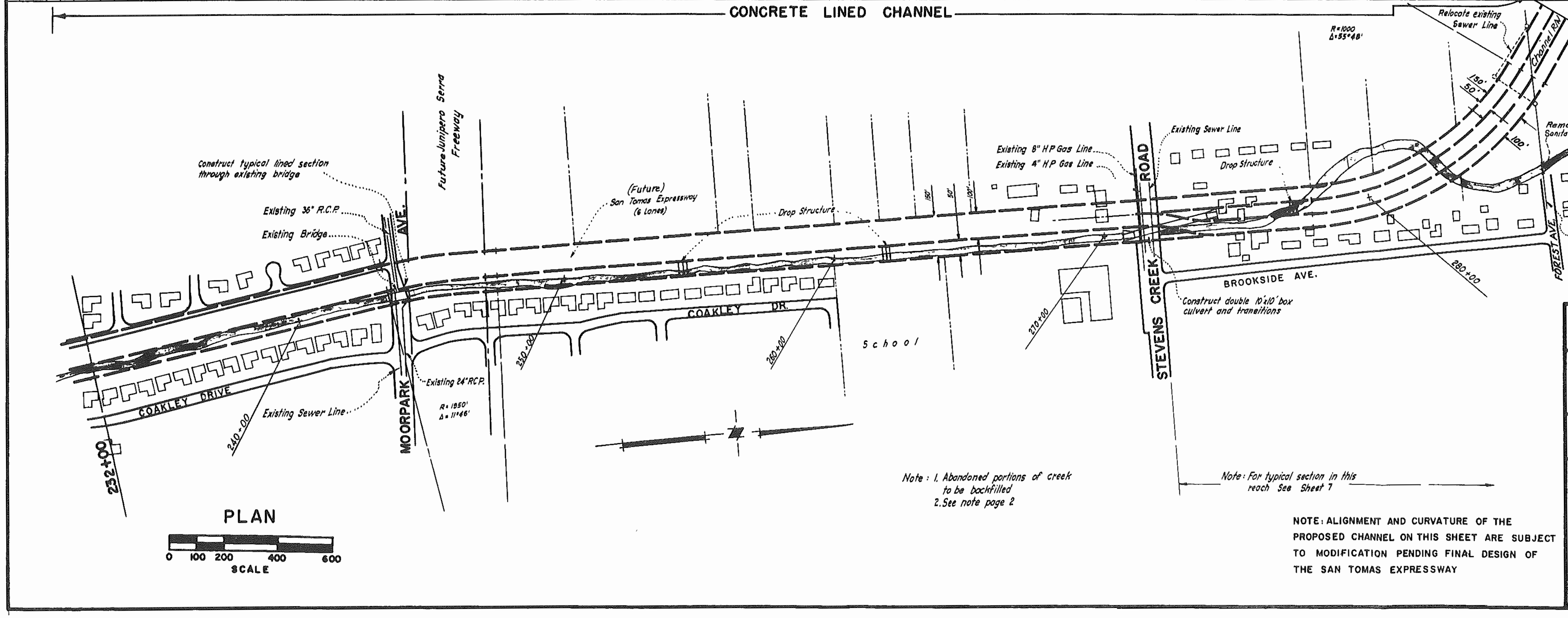
GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF

Date JAN 7 1961

SCALE: As Shown
JOB NO. 1315
SHEET 5 OF 12

PLATE 5





Note: 1. Abandoned portions of creek to be backfilled
2. See note page 2

Note: For typical section in this reach See Sheet 7

NOTE: ALIGNMENT AND CURVATURE OF THE PROPOSED CHANNEL ON THIS SHEET ARE SUBJECT TO MODIFICATION PENDING FINAL DESIGN OF THE SAN TOMAS EXPRESSWAY

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-2
SAN TOMAS AQUINO CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

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Design By CBC & DP
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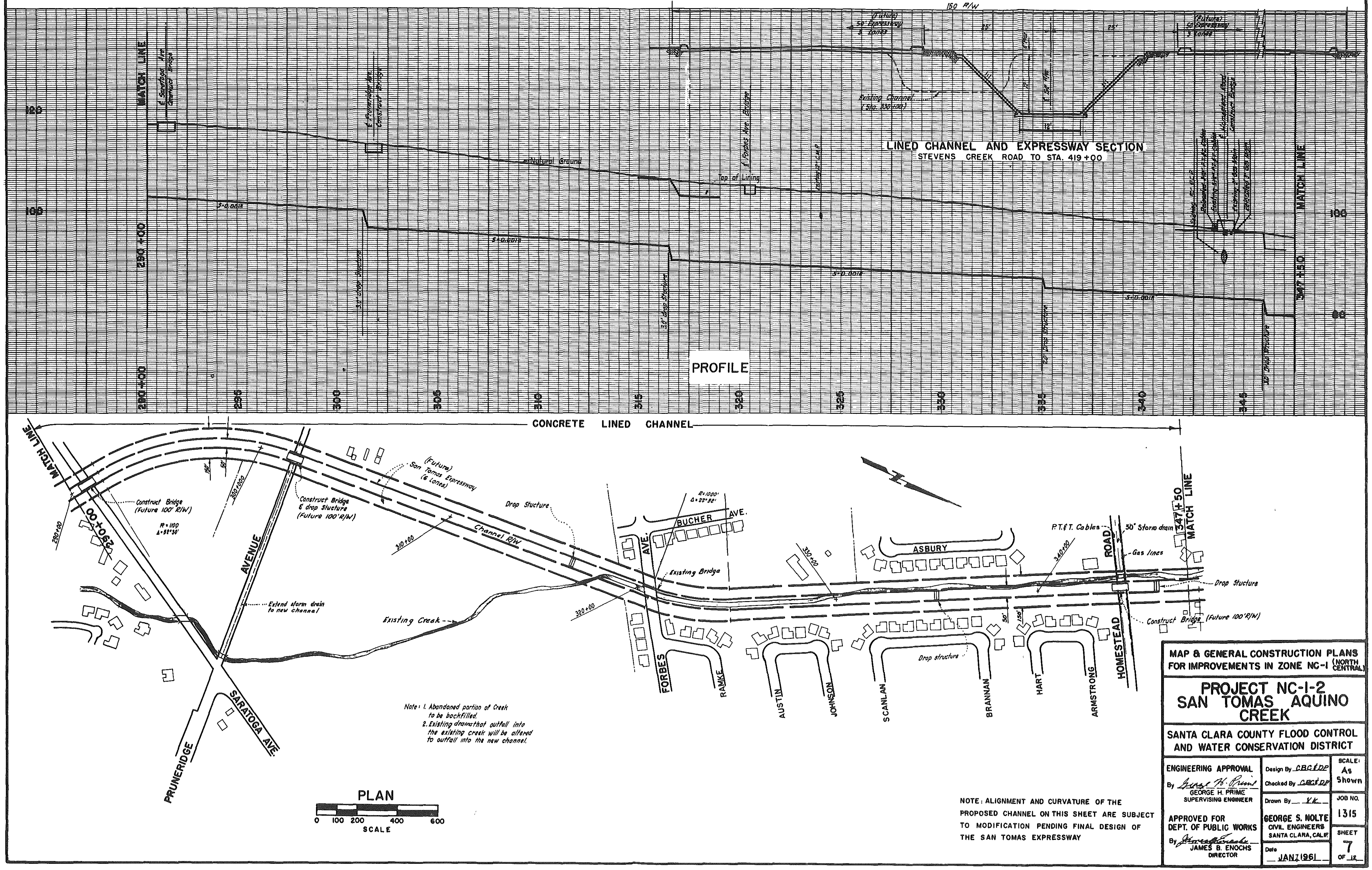
Drawn By VK

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF

Date JAN 7 1961

SCALE: As Shown
JOB NO. 1315
SHEET 6 OF 12

PLATE 6



Note: 1. Abandoned portion of Creek to be backfilled.
2. Existing drains that outfall into the existing creek will be altered to outfall into the new channel.

NOTE: ALIGNMENT AND CURVATURE OF THE PROPOSED CHANNEL ON THIS SHEET ARE SUBJECT TO MODIFICATION PENDING FINAL DESIGN OF THE SAN TOMAS EXPRESSWAY

MAP & GENERAL CONSTRUCTION PLANS FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-2
SAN TOMAS AQUINO CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
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GEORGE H. PRIME
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JAMES B. ENOCHS
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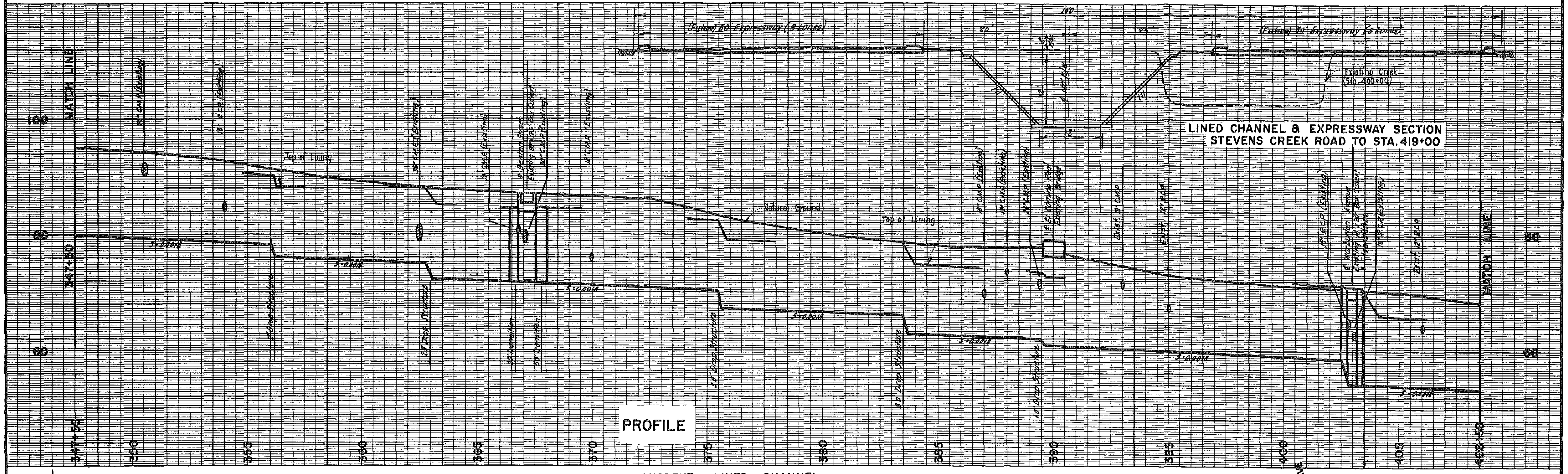
Design By CBC&DP
Checked By CBC&DP
Drawn By VK

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.

Date JAN 1 1961

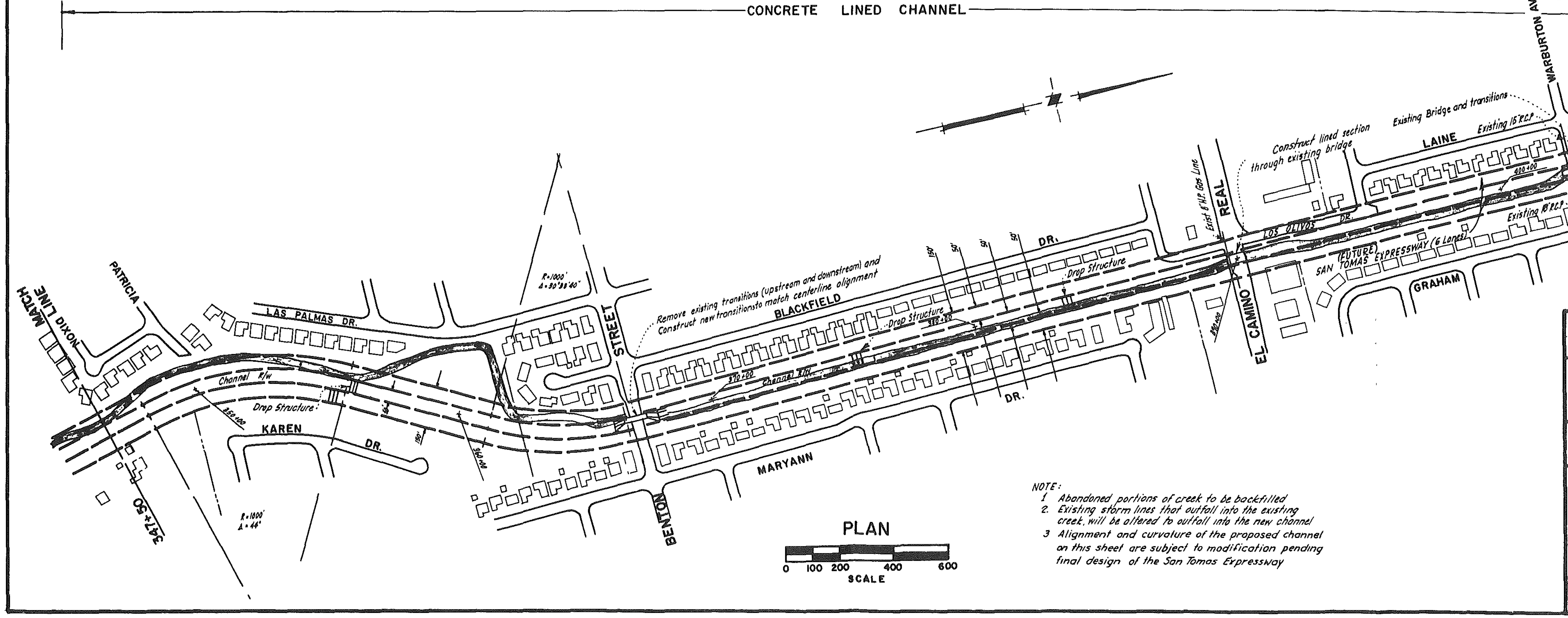
SCALE: As Shown
JOB NO. 1315
SHEET 7 OF 12

PLATE 7



LINED CHANNEL & EXPRESSWAY SECTION
STEVENS CREEK ROAD TO STA. 419+00

PROFILE



PLAN

NOTE:
1. Abandoned portions of creek to be backfilled
2. Existing storm lines that outfall into the existing creek, will be altered to outfall into the new channel
3. Alignment and curvature of the proposed channel on this sheet are subject to modification pending final design of the San Tomas Expressway

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-2
SAN TOMAS AQUINO
CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
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JAMES B ENOCHS
DIRECTOR

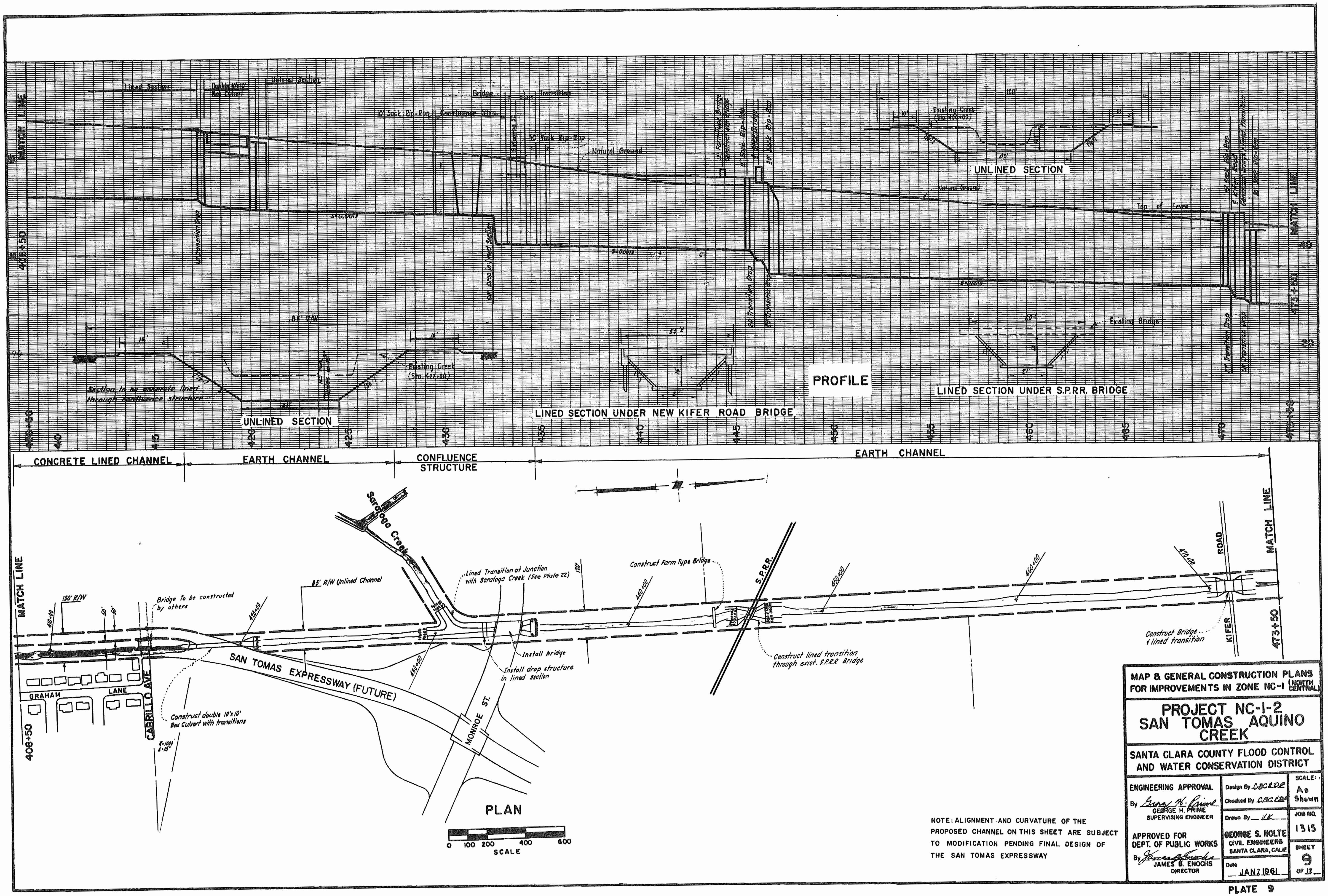
Design By CBC & DP
Checked By CBC & DP
Drawn By VK

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.

Date JAN. 7, 1961

SCALE: As Shown
JOB NO. 1315
SHEET 8 OF 12

PLATE 8



NOTE: ALIGNMENT AND CURVATURE OF THE PROPOSED CHANNEL ON THIS SHEET ARE SUBJECT TO MODIFICATION PENDING FINAL DESIGN OF THE SAN TOMAS EXPRESSWAY

MAP & GENERAL CONSTRUCTION PLANS FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-2
SAN TOMAS AQUINO CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
By George H. Prime
GEORGE H. PRIME
SUPERVISING ENGINEER

APPROVED FOR
DEPT. OF PUBLIC WORKS
By James B. Enochs
JAMES B. ENOCHS
DIRECTOR

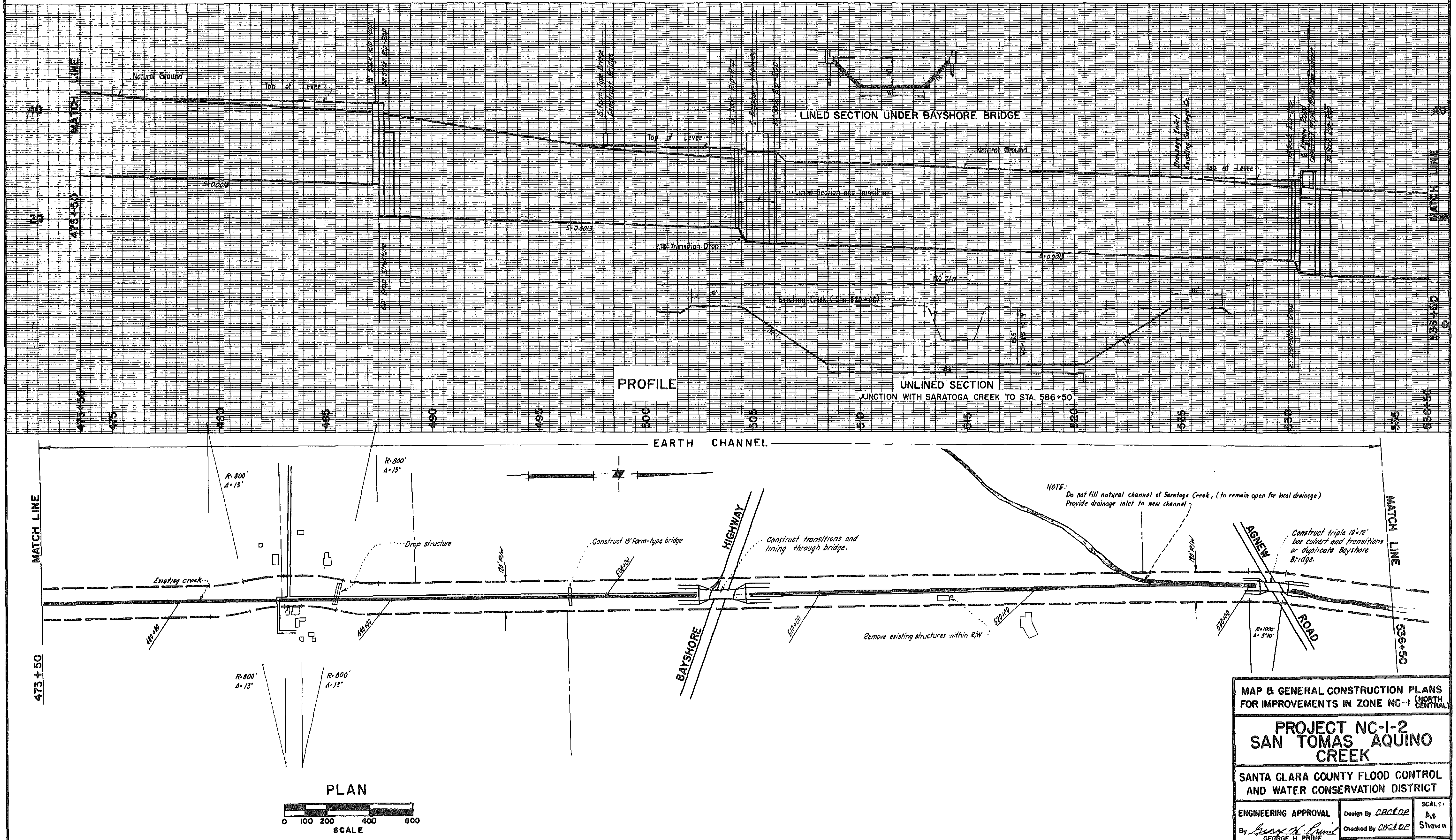
Design By CBC&DE
Checked By CBC&DE
Drawn By VK

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.

Date JAN 7 1961

SCALE: As Shown
JOB NO. 1315
SHEET 9 OF 12

PLATE 9



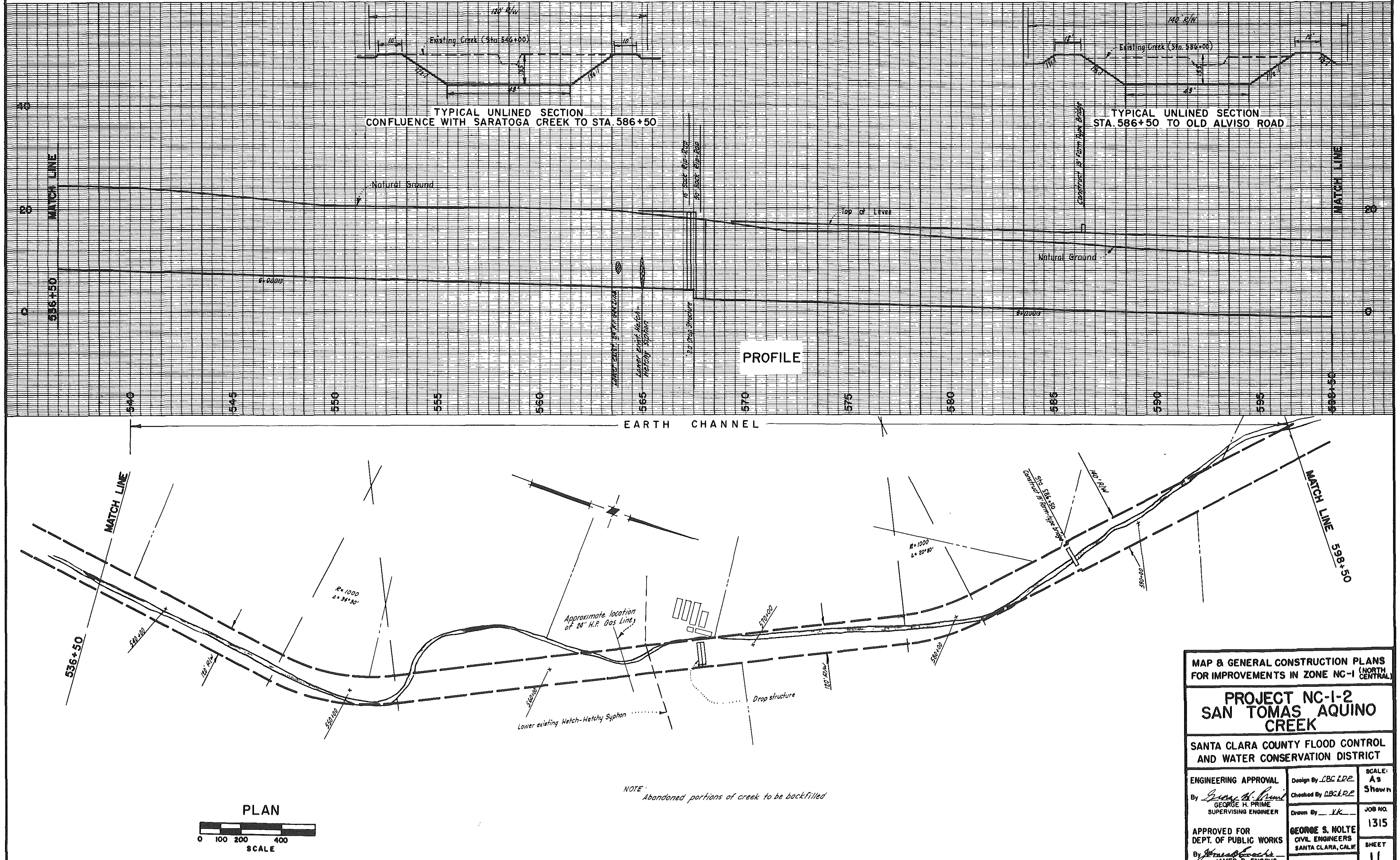
MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-2
SAN TOMAS AQUINO CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL By George H. Prime GEORGE H PRIME SUPERVISING ENGINEER	Design By CBC&DP Checked By CBC&DP	SCALE: As Shown
	Drawn By VK	JOB NO 1315
APPROVED FOR DEPT. OF PUBLIC WORKS By James B Enochs JAMES B ENOCHS DIRECTOR	GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF	SHEET 10 OF 12
	Date JAN 1 1961	

PLATE 10



NOTE: Abandoned portions of creek to be backfilled

MAP & GENERAL CONSTRUCTION PLANS FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-2
SAN TOMAS AQUINO CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

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JAMES B ENOCHS
DIRECTOR

Design By CBC EDP
Checked By CBC EDP
Drawn By VK

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.

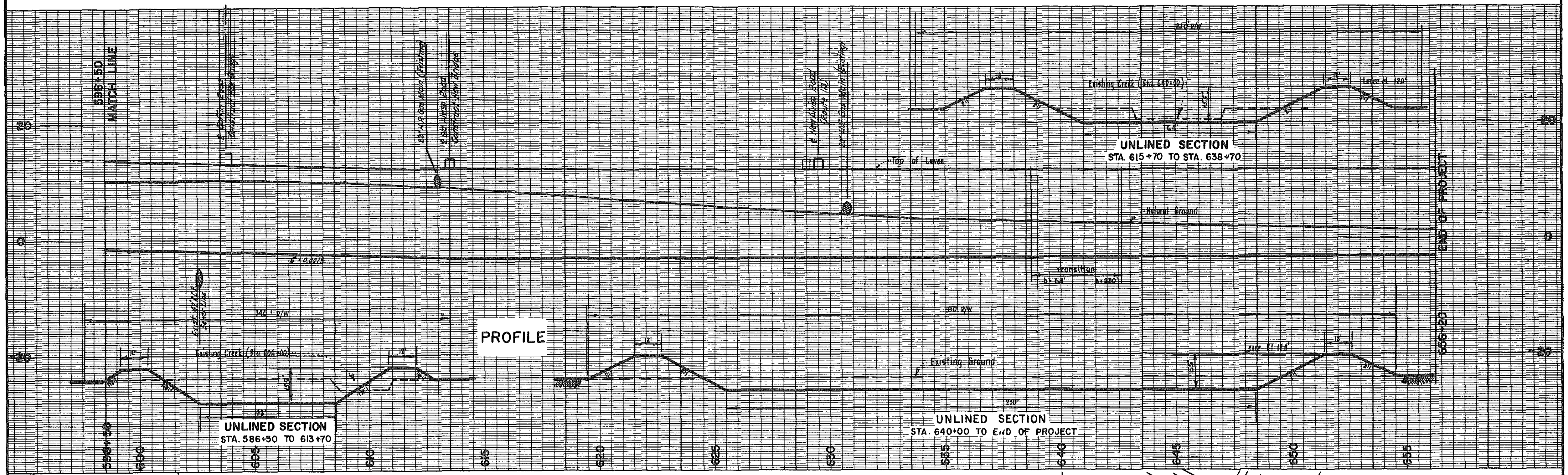
Date JAN 7 1961

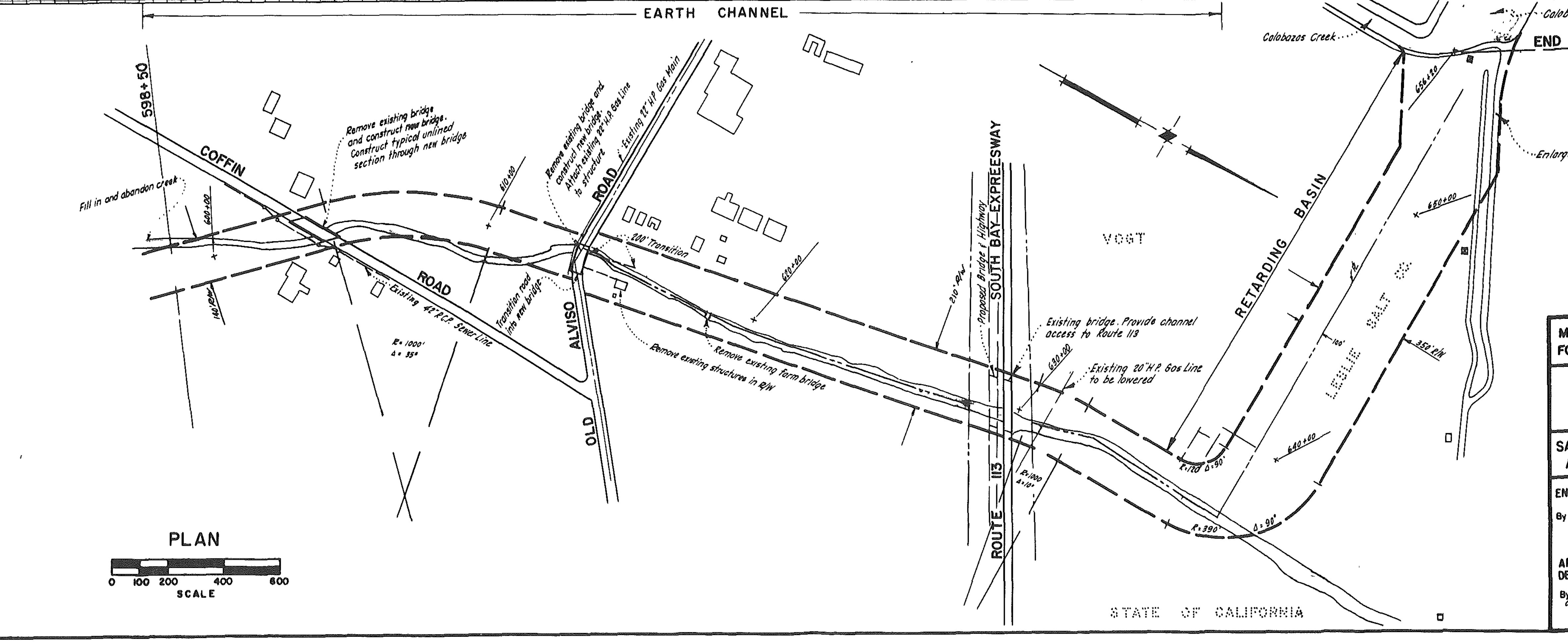
SCALE: As Shown

JOB NO. 1315

SHEET 11 OF 12

PLATE 11


PROFILE
598+50 MATCH LINE
22" H.P. Gas Main (Existing)
℄ Old Alviso Road Construct New Bridge
℄ New Alviso Road (Route 113)
20" H.P. Gas Main (Existing)
Top of Levee
Natural Ground
Existing Creek (Sta. 640+00)
UNLINED SECTION
STA. 615+70 TO STA. 638+70
END OF PROJECT
Transition
S = 0.0015
Exist. 42" R.C.P. Sewer Line
140' R/W
350' R/W
210' R/W
Existing Creek (Sta. 606+00)
Existing Ground
UNLINED SECTION
STA. 586+50 TO 613+70
UNLINED SECTION
STA. 640+00 TO END OF PROJECT
20
0
-20
598+50
600
605
610
615
620
625
630
635
640
645
650
655
656+20


EARTH CHANNEL
PLAN
0 100 200 400 800
SCALE
598+50
COFFIN ROAD
Fill in and abandon creek
Remove existing bridge and construct new bridge. Construct typical unlined section through new bridge
Existing 42" R.C.P. Sewer Line
R = 1000'
Δ = 35°
140' R/W
Transition road into new bridge
Remove existing bridge and construct new bridge. Attach existing 22" H.P. Gas Line to structure
Existing 22" H.P. Gas Main
OLD ALVISO ROAD
200' Transition
Remove existing structures in R/W
Remove existing farm bridge
210' R/W
Proposed Bridge & Highway
SOUTH BAY EXPRESSWAY
ROUTE 113
Existing bridge. Provide channel access to Route 113
Existing 20" H.P. Gas Line to be lowered
R = 1000
Δ = 10°
VOGT
RETARDING BASIN
LESLIE SALT CO.
350' R/W
R = 120 Δ = 90°
R = 390
Δ = 90°
STATE OF CALIFORNIA
Calabazas Creek
Calabazas holding Basin
END OF PROJECT
Enlarge existing levee to design section
600+00
610+00
620+00
630+00
640+00
650+00
656+20

NOTE:
1. Tie new levees into existing levees and remove old levees within retarding basin
2. Existing P.G & E towers within retarding basin to be protected from high water.

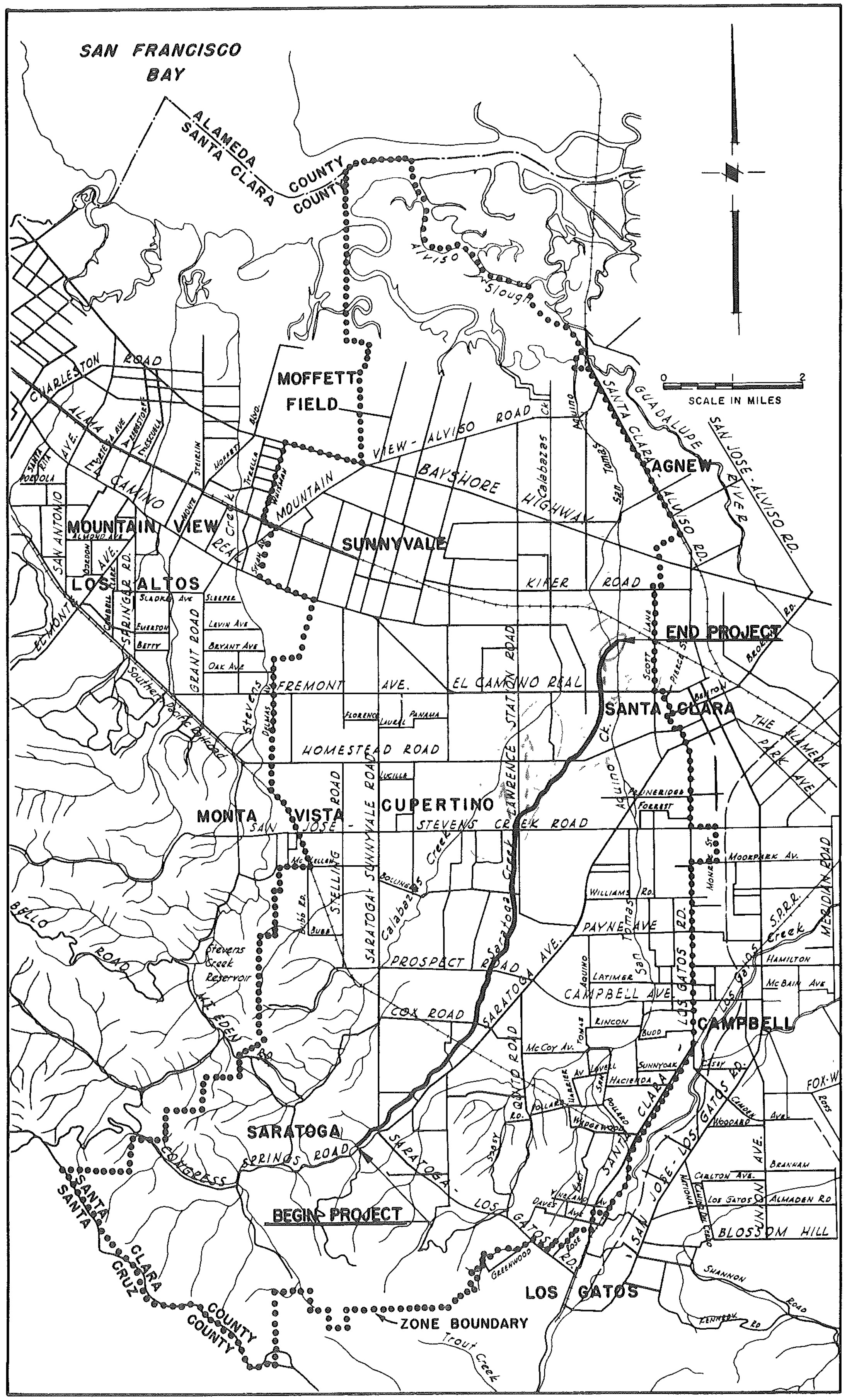
MAP & GENERAL CONSTRUCTION PLANS FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-2
SAN TOMAS AQUINO CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL By George H. Prime GEORGE H. PRIME SUPERVISING ENGINEER	Design By CBC & DP Checked By CBC & DP	SCALE: As Shown
APPROVED FOR DEPT. OF PUBLIC WORKS By James B Enochs JAMES B ENOCHS DIRECTOR	Drawn By VK GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF.	JOB NO. 1315
	Date JAN 7 1961	SHEET 12 OF 13

PLATE 12



MAP AND GENERAL CONSTRUCTION PLANS

OF

ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 3

SARATOGA CREEK IMPROVEMENT

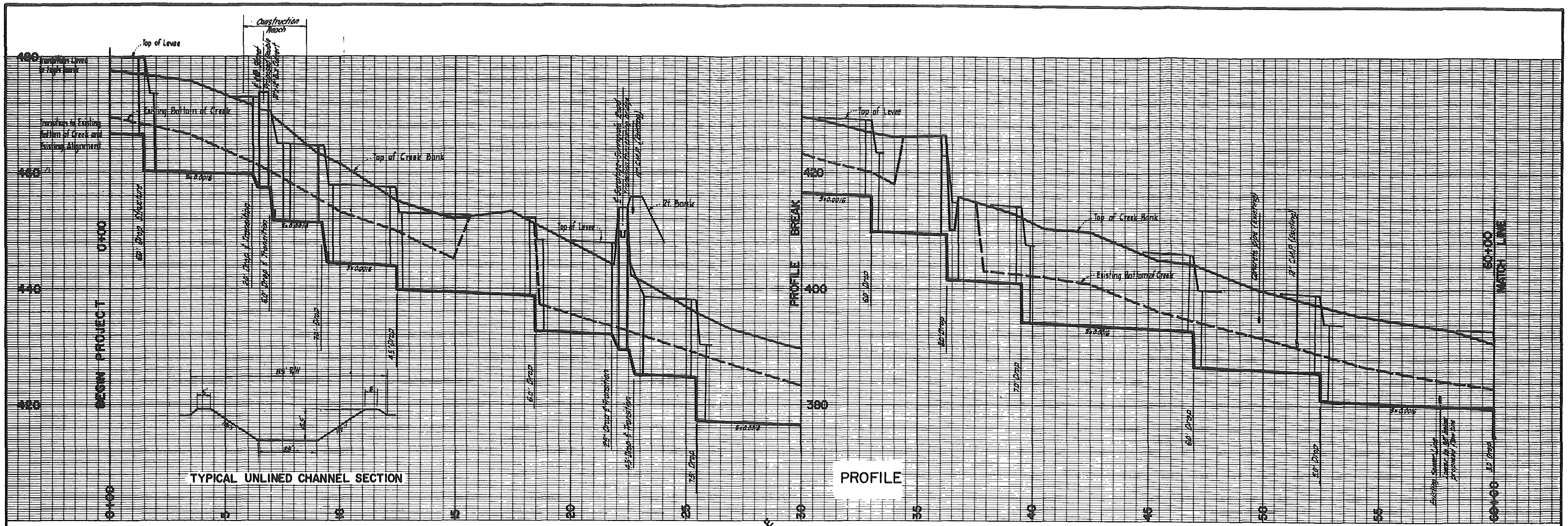
FROM

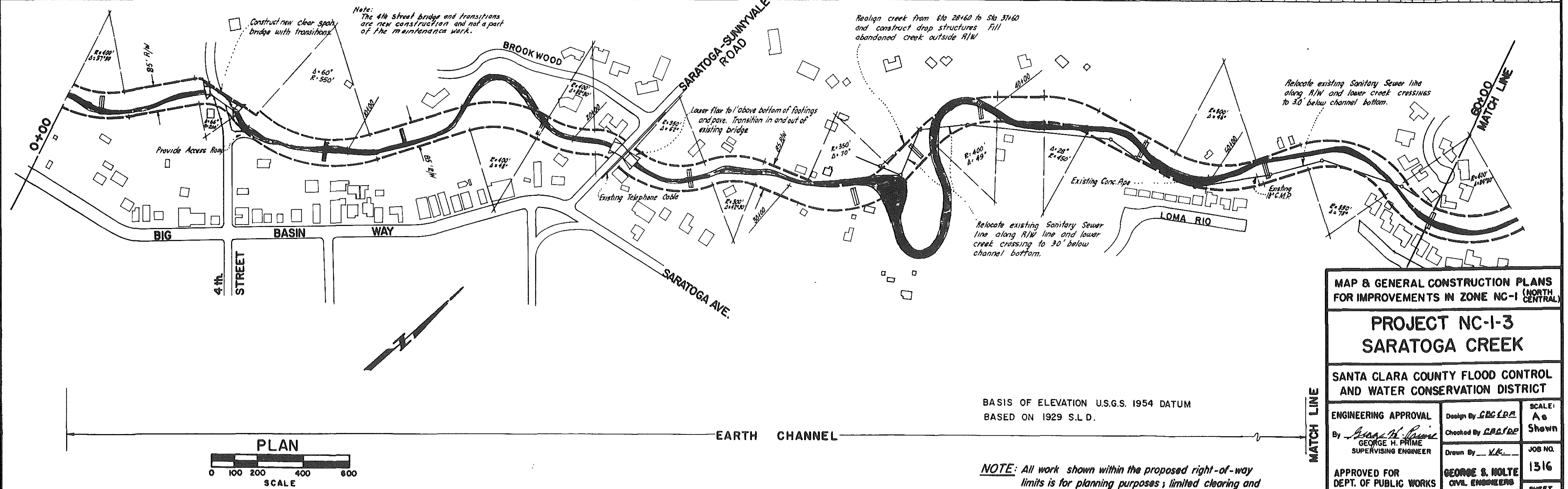
4th STREET (SARATOGA) TO SAN TOMAS AQUINO CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA CLARA COUNTY, CALIFORNIA

PLATE 13




0+00
R=400'
Δ=37°30'
85' R/W
Construct new clear span bridge with transitions
Note: The 4th Street bridge and transitions are new construction and not a part of the maintenance work.
Δ=60°
R=550'
10+00
Provide Access Road
85' R/W
R=400'
Δ=48°
BROOKWOOD
R=400'
Δ=52°30'
20+00
SARATOGA-SUNNYVALE ROAD
R=350'
Δ=62°
Lower flow to 1' above bottom of footings and pave. Transition in and out of existing bridge
85' R/W
R=350'
Δ=70°
Existing Telephone Cable
R=300'
Δ=42°30'
30+00
BIG BASIN WAY
4th. STREET
SARATOGA AVE.
Realign creek from Sta 28+60 to Sta 37+60 and construct drop structures Fill abandoned creek outside R/W
40+00
R=400'
Δ=49°
Δ=28°
R=450'
Existing Conc. Pipe
Relocate existing Sanitary Sewer line along R/W line and lower creek crossing to 3.0' below channel bottom.
LOMA RIO
R=500'
Δ=46°
50+00
Existing 18" C.M.P.
Relocate existing Sanitary Sewer line along R/W and lower creek crossings to 3.0' below channel bottom.
R=350'
Δ=78°
R=400'
Δ=84°30'
60+00 MATCH LINE
MATCH LINE
EARTH CHANNEL
0 100 200 400 600
SCALE

PLAN

BASIS OF ELEVATION U.S.G.S. 1954 DATUM
BASED ON 1929 S.L.D.

NOTE: All work shown within the proposed right-of-way limits is for planning purposes; limited clearing and bank protection in critical areas of existing channel will be done on a maintenance basis.

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-3
SARATOGA CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
By George H. Prime
GEORGE H. PRIME
SUPERVISING ENGINEER

APPROVED FOR
DEPT. OF PUBLIC WORKS
By James B. Enochs
JAMES B. ENOCHS
DIRECTOR

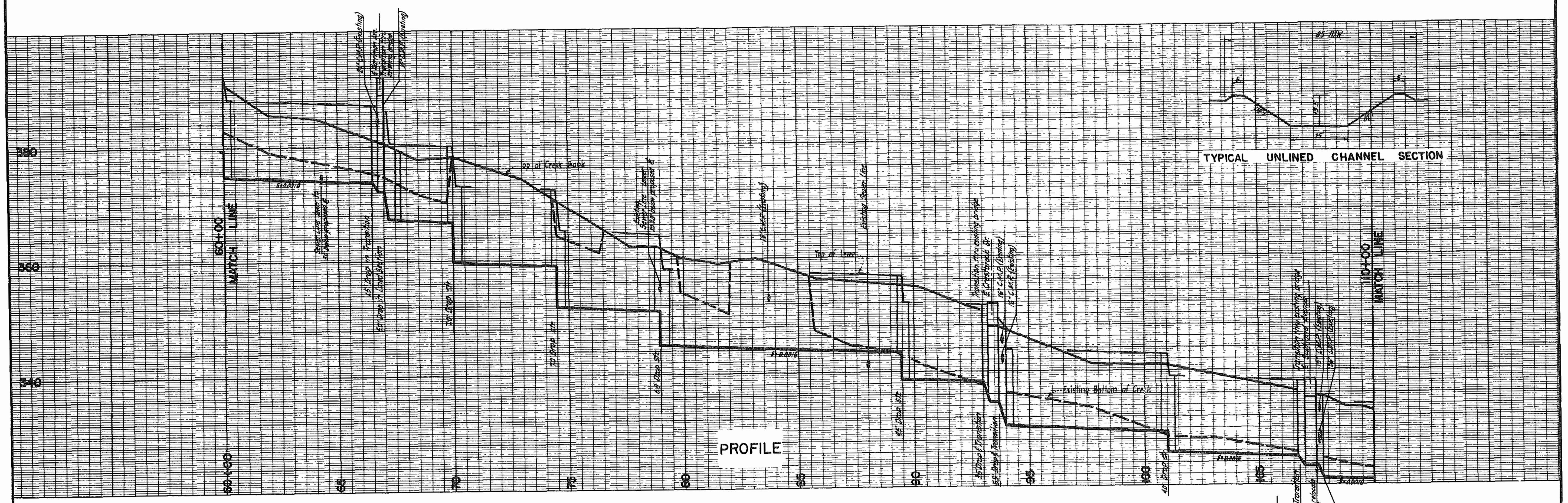
Design By CBC & DP
Checked By CBC & DP
Drawn By V.K.

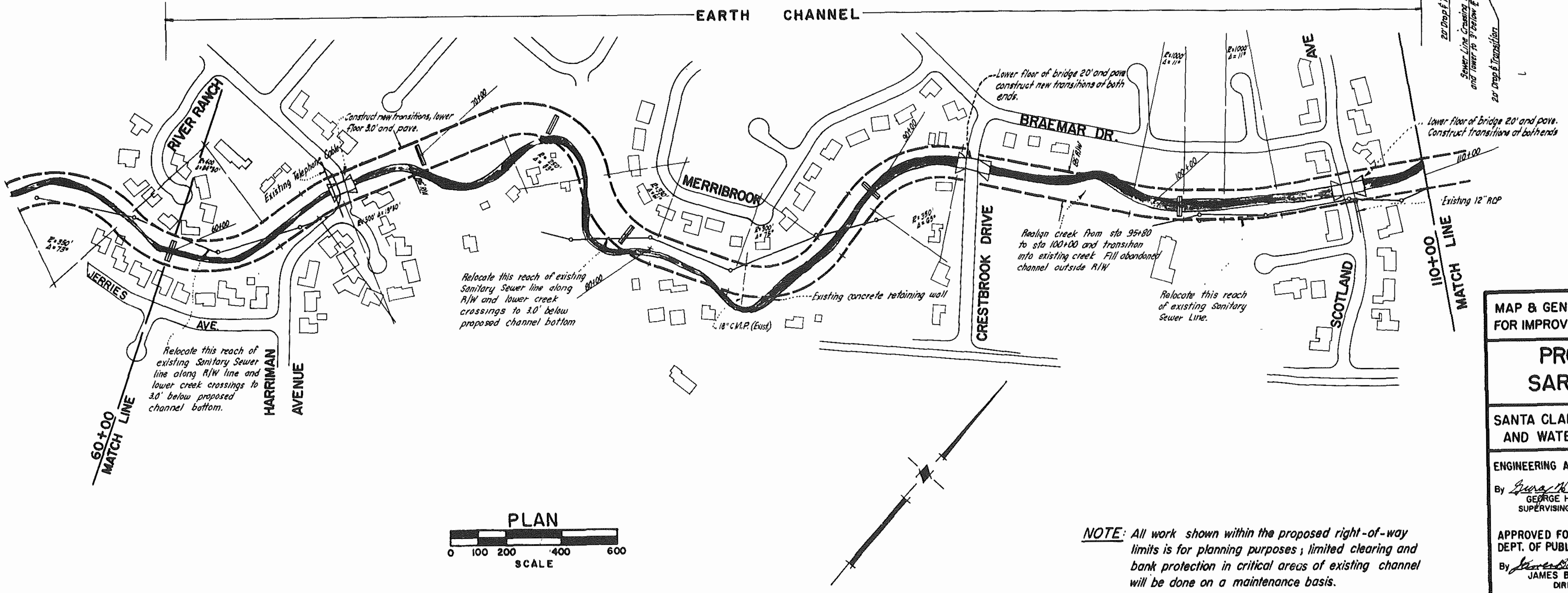
GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.

Date JAN. 7, 1961

SCALE: As Shown
JOB NO. 1316
SHEET 2 OF 10

PLATE 14




EARTH CHANNEL
2.0' Drop & Transition
Sewer Line Crossing relocate and lower to 3' below ℄
2.0' Drop & Transition
RIVER RANCH
R=400'
Δ=84°30'
R=350'
Δ=73°
60+00
JERRIES AVE.
Existing Telephone Cable
Construct new transitions, lower floor 3.0' and pave.
70+00
R=500' Δ=19°30'
R=250'
Δ=83°
85' R/W
Relocate this reach of existing Sanitary Sewer line along R/W line and lower creek crossings to 3.0' below proposed channel bottom.
HARRIMAN
AVENUE
60+00
MATCH LINE
R=330'
Δ=61°
MERRIBROOK
R=300'
Δ=75°
Relocate this reach of existing Sanitary Sewer line along R/W and lower creek crossings to 3.0' below proposed channel bottom
80+00
18" C.M.P. (Exist)
Existing concrete retaining wall
90+00
R=350'
Δ=65°
Lower floor of bridge 2.0' and pave construct new transitions at both ends.
BRAEMAR DR.
85' R/W
CRESTBROOK DRIVE
Realign creek from sta 95+80 to sta 100+00 and transition into existing creek. Fill abandoned channel outside R/W
R=1000'
Δ=11°
R=1000'
Δ=11°
100+00
Relocate this reach of existing Sanitary Sewer Line.
AVE
SCOTLAND
Lower floor of Bridge 2.0' and pave. Construct transitions at both ends
110+00
Existing 12" RCP
110+00
MATCH LINE
PLAN
0
100
200
400
600
SCALE

NOTE: All work shown within the proposed right-of-way limits is for planning purposes; limited clearing and bank protection in critical areas of existing channel will be done on a maintenance basis.

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-3
SARATOGA CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
By George H. Prime
GEORGE H. PRIME
SUPERVISING ENGINEER

APPROVED FOR
DEPT. OF PUBLIC WORKS
By James B. Enochs
JAMES B. ENOCHS
DIRECTOR

Design By GBC & DP.
Checked By GBC & DP.
Drawn By VK.

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF

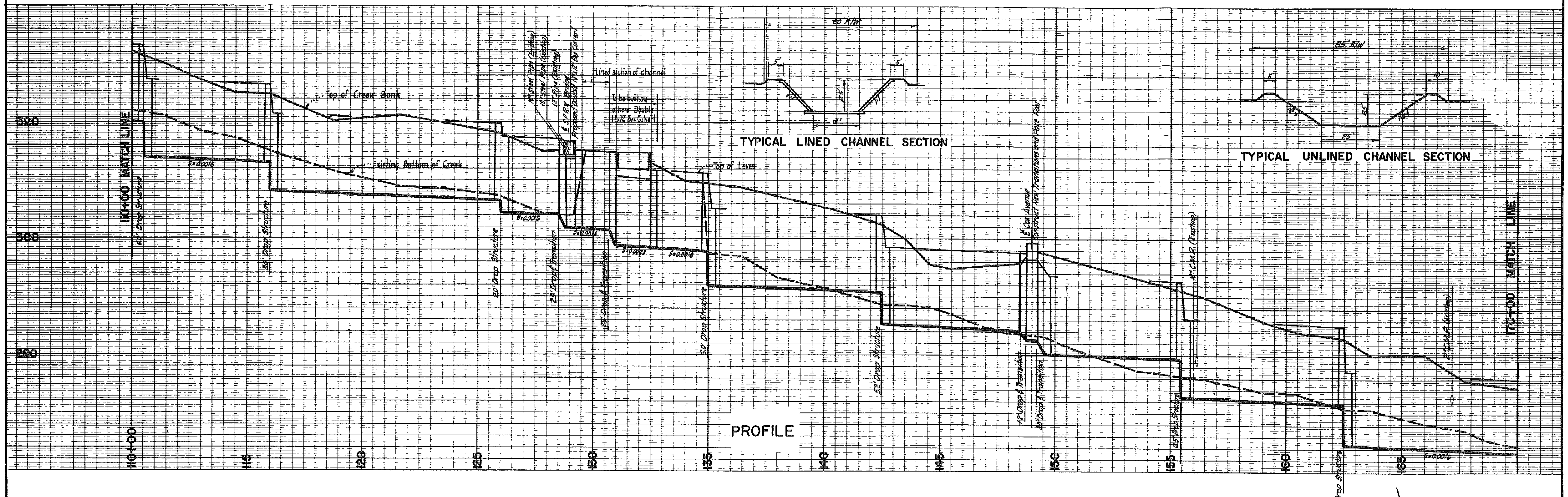
Date JAN. 7, 1961

SCALE: As Shown

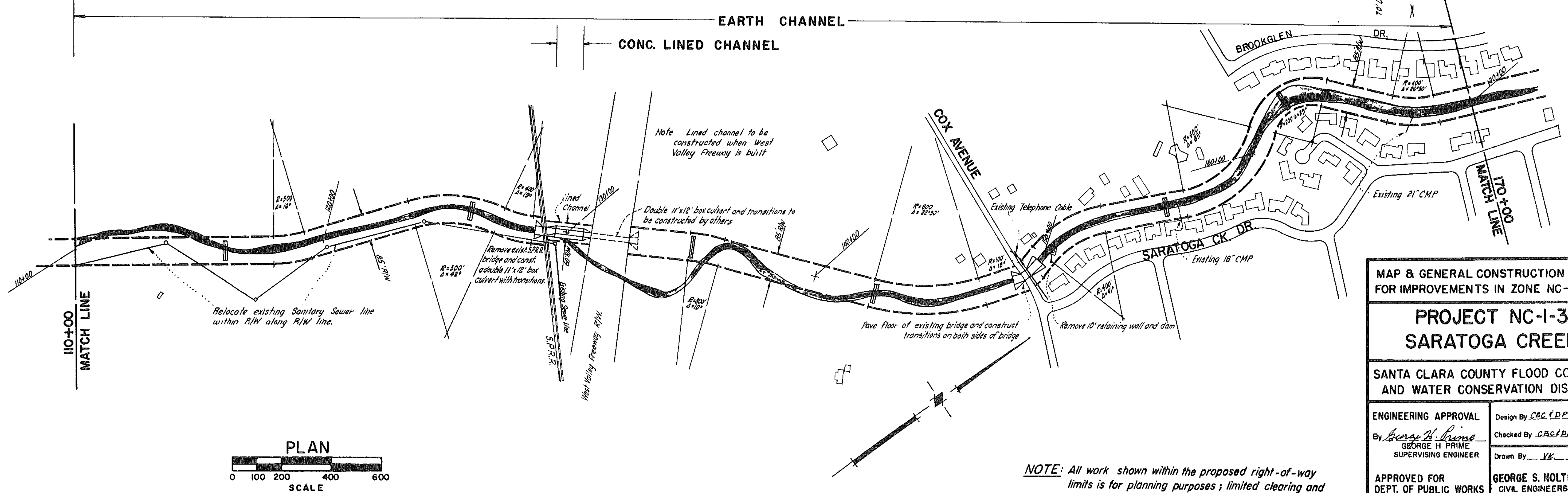
JOB NO. 1316

SHEET 3 OF 10

PLATE 15



PROFILE



PLAN

NOTE: *All work shown within the proposed right-of-way limits is for planning purposes; limited clearing and bank protection in critical areas of existing channel will be done on a maintenance basis.*

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-3
SARATOGA CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

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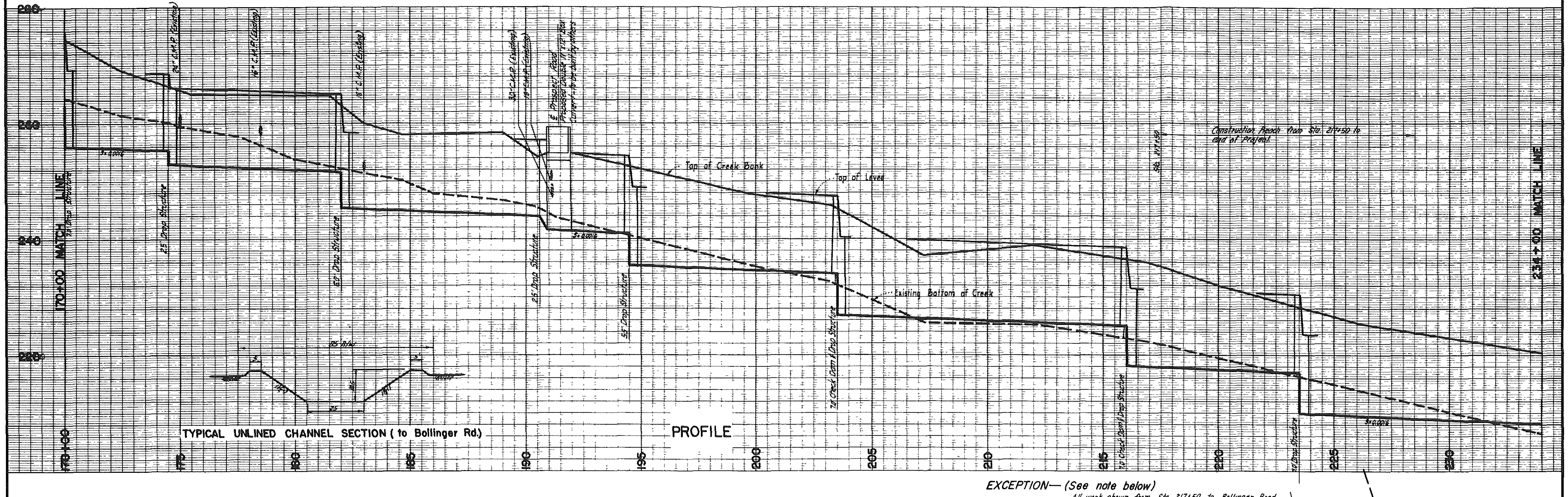
GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF

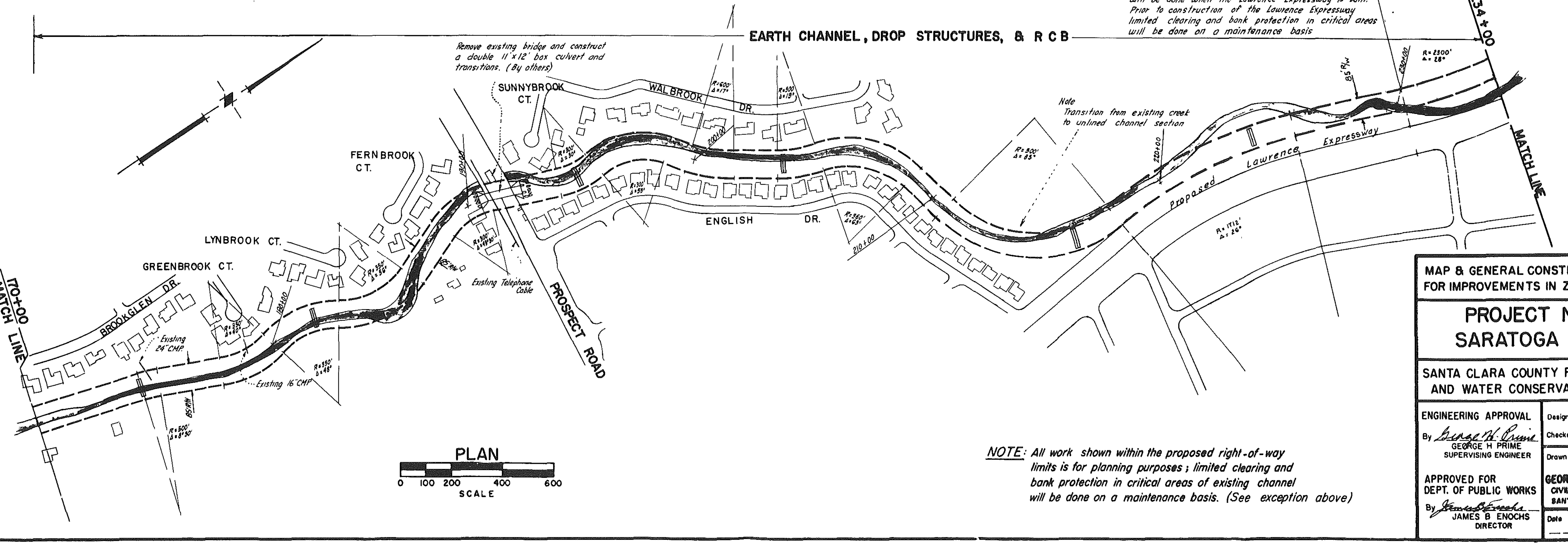
Date JAN 7, 1961

SCALE: As Shown
JOB NO 1316
SHEET 4 OF 10



EXCEPTION— (See note below)

All work shown from Sta 217+50 to Bollinger Road will be done when the Lawrence Expressway is built. Prior to construction of the Lawrence Expressway limited clearing and bank protection in critical areas will be done on a maintenance basis



NOTE: All work shown within the proposed right-of-way limits is for planning purposes; limited clearing and bank protection in critical areas of existing channel will be done on a maintenance basis. (See exception above)

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-3
SARATOGA CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

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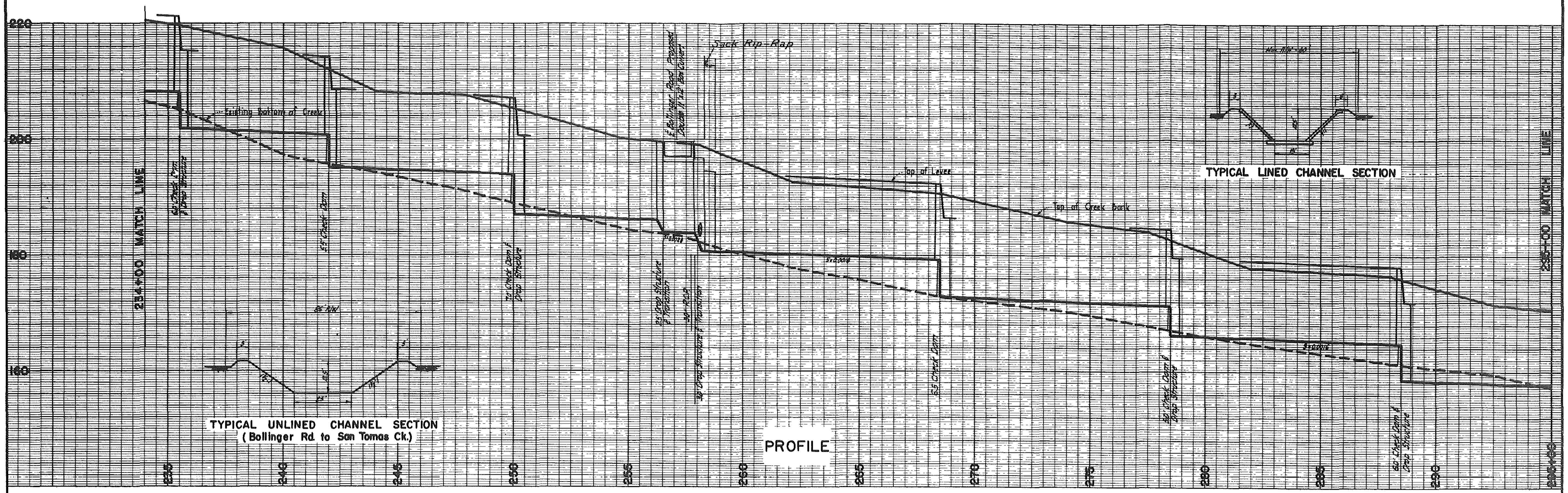
GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF

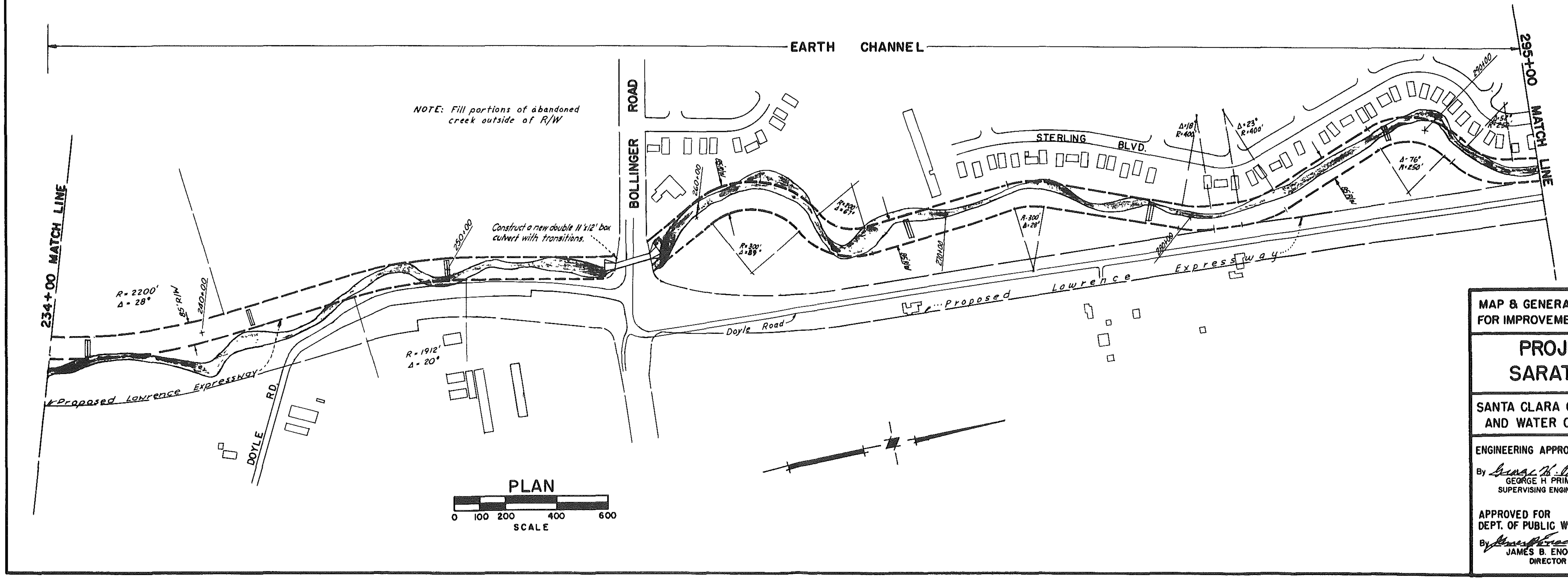
Date JAN 7, 1961

SCALE: As Shown
JOB NO. 1316
SHEET 5 OF 10

PLATE 17


220
200
180
160
234+00 MATCH LINE
295+00 MATCH LINE
60' Check Dam & Drop Structure
55' Check Dam
70' Check Dam & Drop Structure
25' Drop Structure & Transition
℄ Bollinger Road Proposed Double 11'x12' Box Culvert
30" RCP
30' Drop Structure & Transition
Sack Rip-Rap
Existing Bottom of Creek
Top of Levee
Top of Creek Bank
S=0.0028
S=0.0016
S=0.0016
65' Check Dam
50' Check Dam & Drop Structure
60' Check Dam & Drop Structure
85' R/W
5'
5'
13.5'
1½:1
1½:1
25'
TYPICAL UNLINED CHANNEL SECTION
(Bollinger Rd. to San Tomas Ck.)
Min. R/W = 80'
3'
3'
1½:1
1½:1
10'
TYPICAL LINED CHANNEL SECTION
235
240
245
250
255
260
265
270
275
280
285
290
295+00

PROFILE



PLAN

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-3
SARATOGA CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

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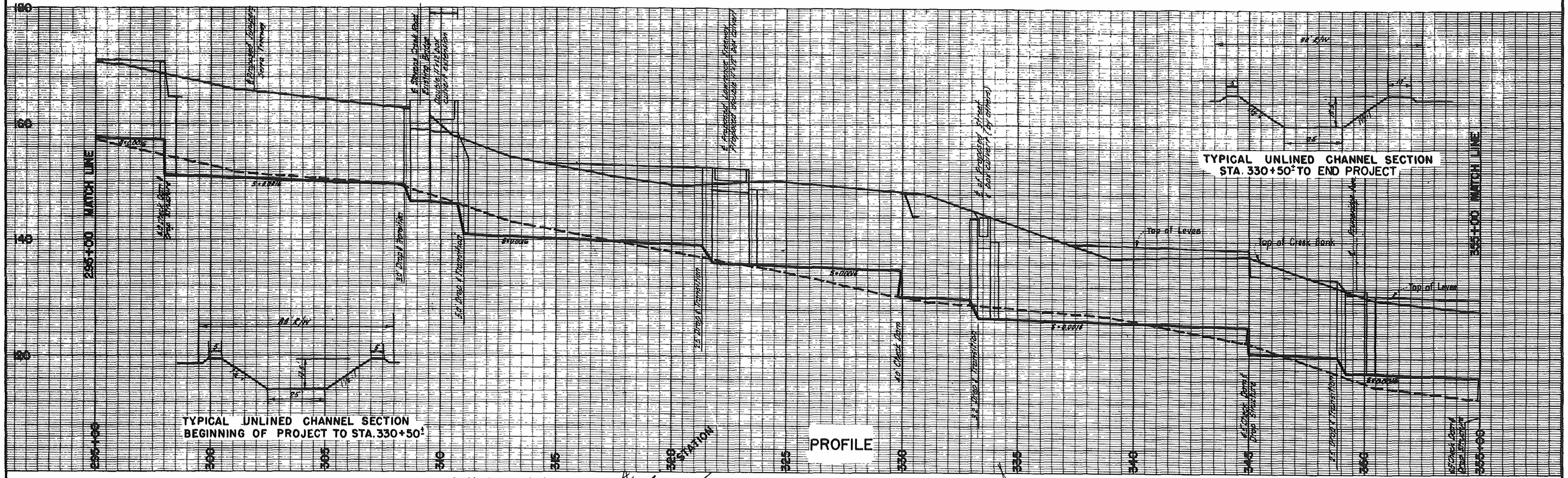
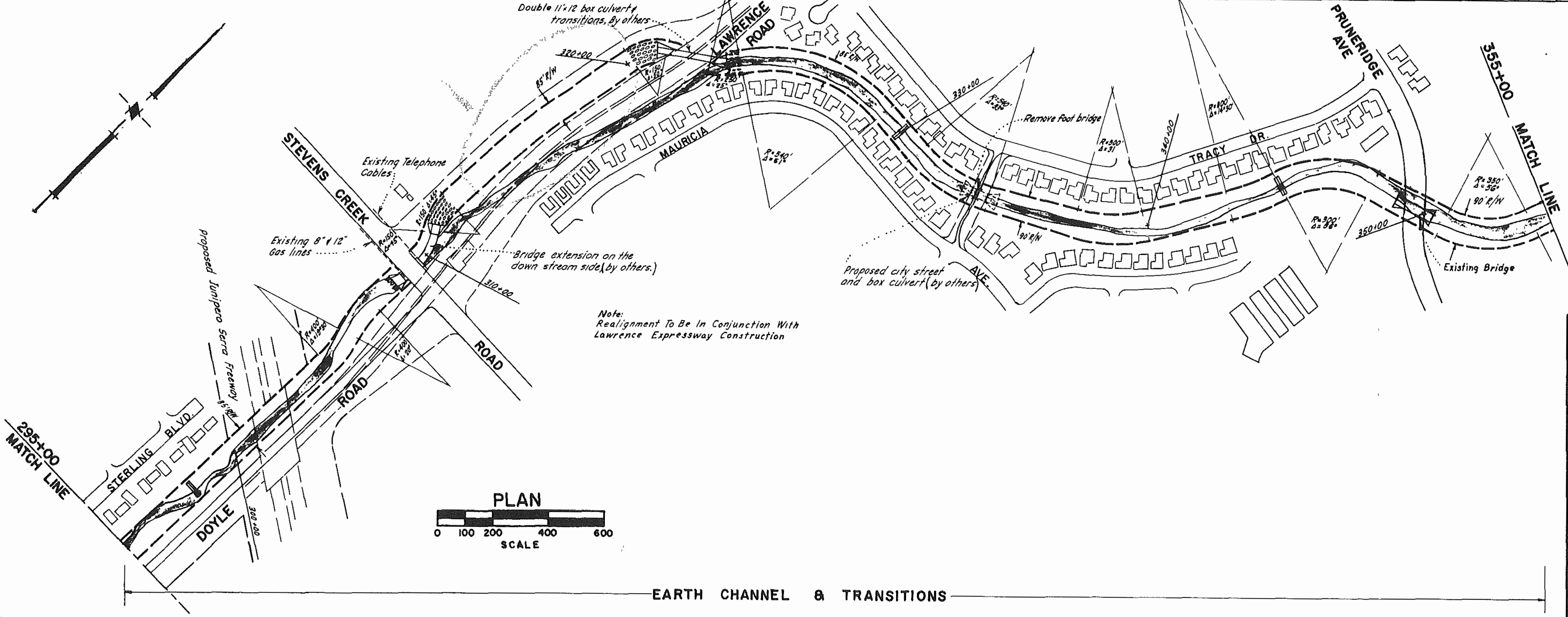
GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.
Date JAN 7, 1961

SCALE: As Shown
JOB NO. 1316
SHEET 6 OF 10

PLATE 18


PROFILE
180
160
140
120
295+00 MATCH LINE
S=0.0016
4.5' Check Dam & Drop Structure
S=0.0016
E Proposed Junipero Serra Freeway
30' Drop & Transition
E Stevens Creek Road Existing Bridge
Double 11'x12' box culvert extension
5.0' Drop & Transition
S=0.0016
85' R/W
25
TYPICAL UNLINED CHANNEL SECTION
BEGINNING OF PROJECT TO STA. 330+50±
E Proposed Lawrence Freeway
Proposed Double 11'x12' box culvert
2.5' Drop & Transition
S=0.0016
4.0' Check Dam
E of Proposed Street & box culvert (by others)
3.2' Drop & Transition
S=0.0016
Top of Levee
Top of Creek Bank
Top of Levee
E Pruneridge Ave.
90' R/W
26
TYPICAL UNLINED CHANNEL SECTION
STA. 330+50± TO END PROJECT
4.5' Check Dam & Drop Structure
2.5' Drop & Transition
S=0.0016
4.5' Check Dam & Drop Structure
355+00 MATCH LINE
STATION
295+00
300
305
310
315
320
325
330
335
340
345
350
355+00


PLAN
Double 11'x12' box culvert & transitions, by others
320+00
85' R/W
LAWRENCE ROAD
Existing Telephone Cables
STEVENS CREEK
MAURICIA
R=540'
330+00
Remove Foot bridge
R=300'
340+00
TRACY DR.
R=800'
PRUNERIDGE AVE
355+00 MATCH LINE
R=350'
90' R/W
R=300'
350+00
Existing Bridge
Existing 8" & 12" Gas lines
R=1500'
Bridge extension on the down stream side (by others.)
310+00
Proposed city street and box culvert (by others)
AVE
90' R/W
Note:
Realignment To Be In Conjunction With Lawrence Expressway Construction
ROAD
Proposed Junipero Serra Freeway
R=400'
ROAD
STERLING BLVD.
295+00 MATCH LINE
DOYLE
300+00
0 100 200 400 600
SCALE
EARTH CHANNEL & TRANSITIONS

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-3
SARATOGA CREEK

SANTA CLARA COUNTY FLOOD CONTROL
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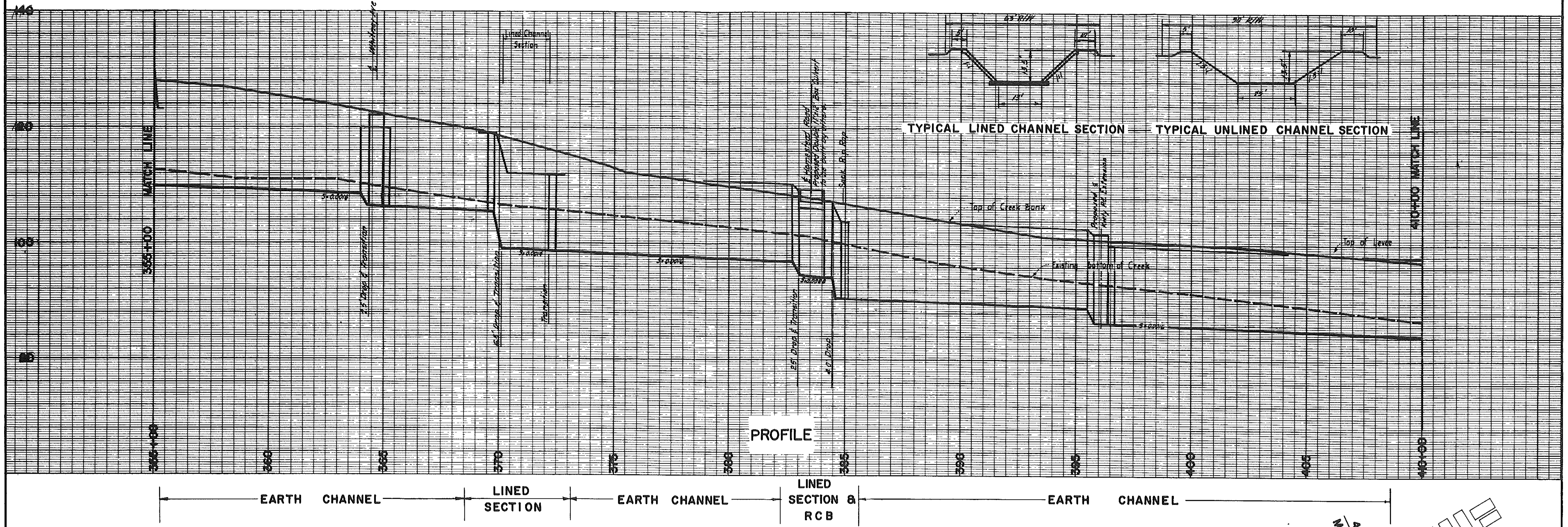
GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.

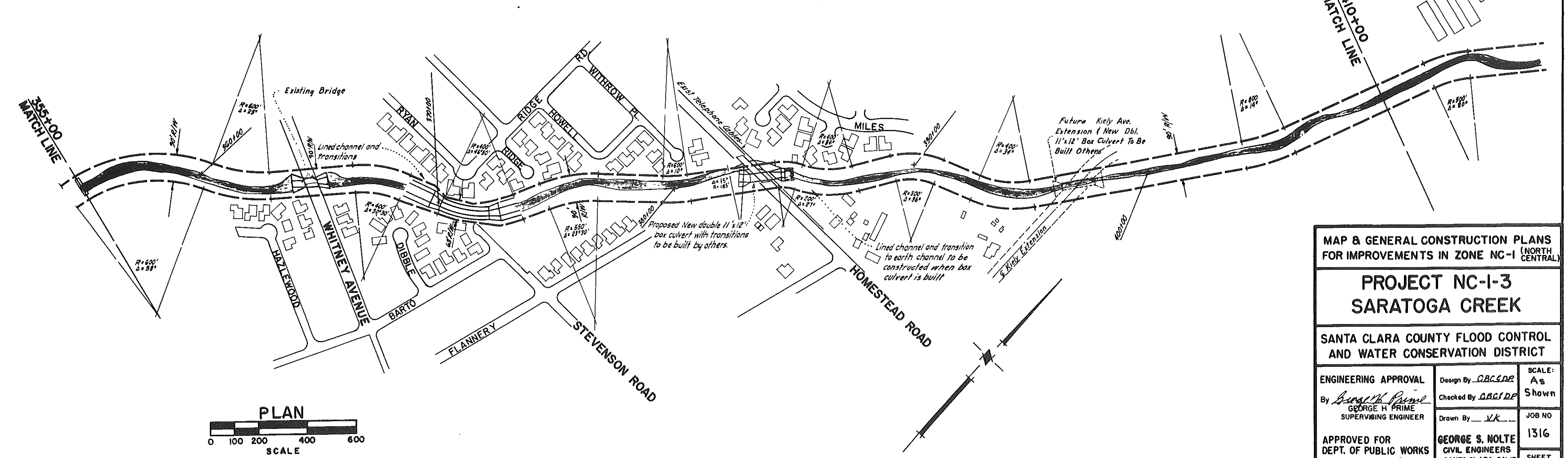
Date JAN 7, 1961

SCALE As Shown
JOB NO 1316
SHEET 7 OF 10

PLATE 19

96
24
cc





MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-3
SARATOGA CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

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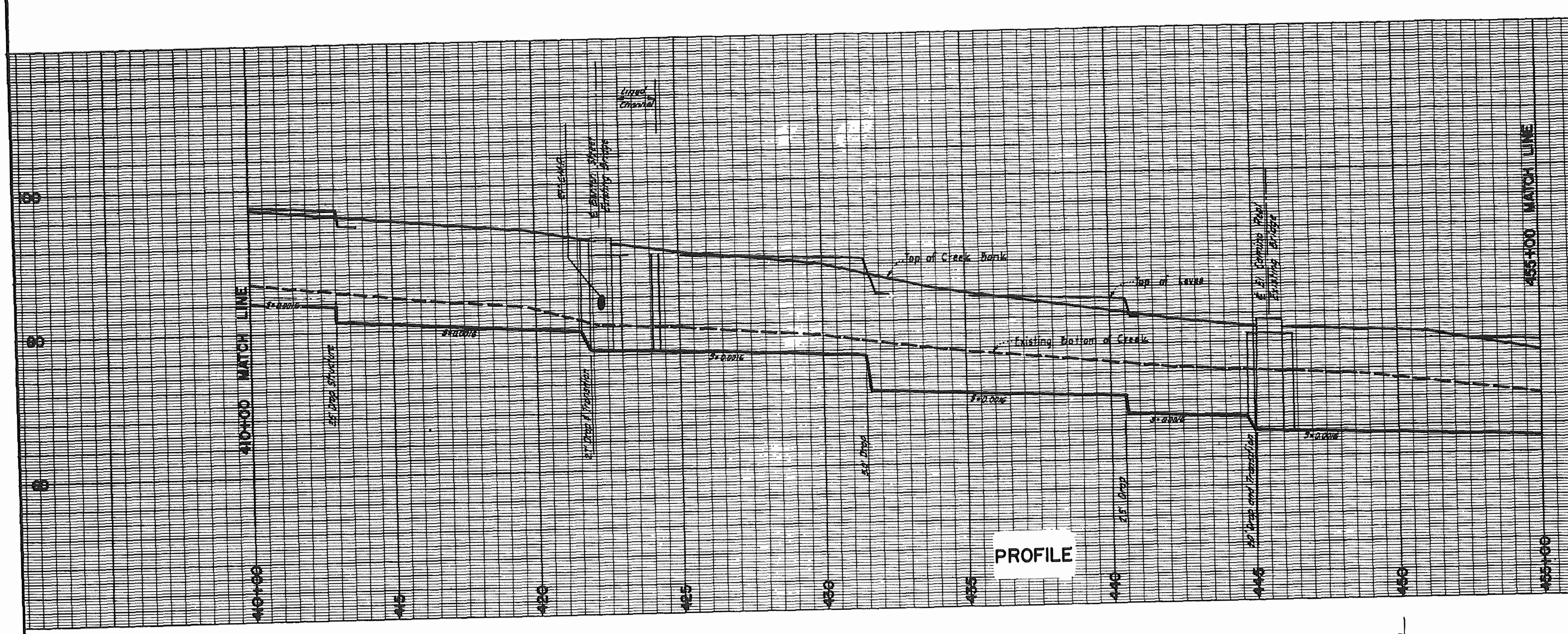
GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.

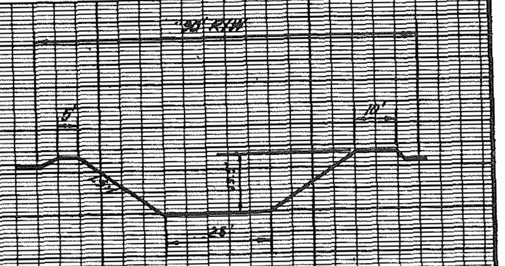
Date JAN 7, 1961

SCALE: As Shown
JOB NO 1316
SHEET 8 OF 10

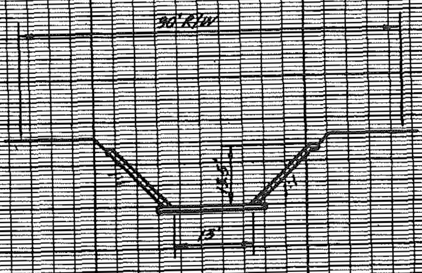
PLATE 20



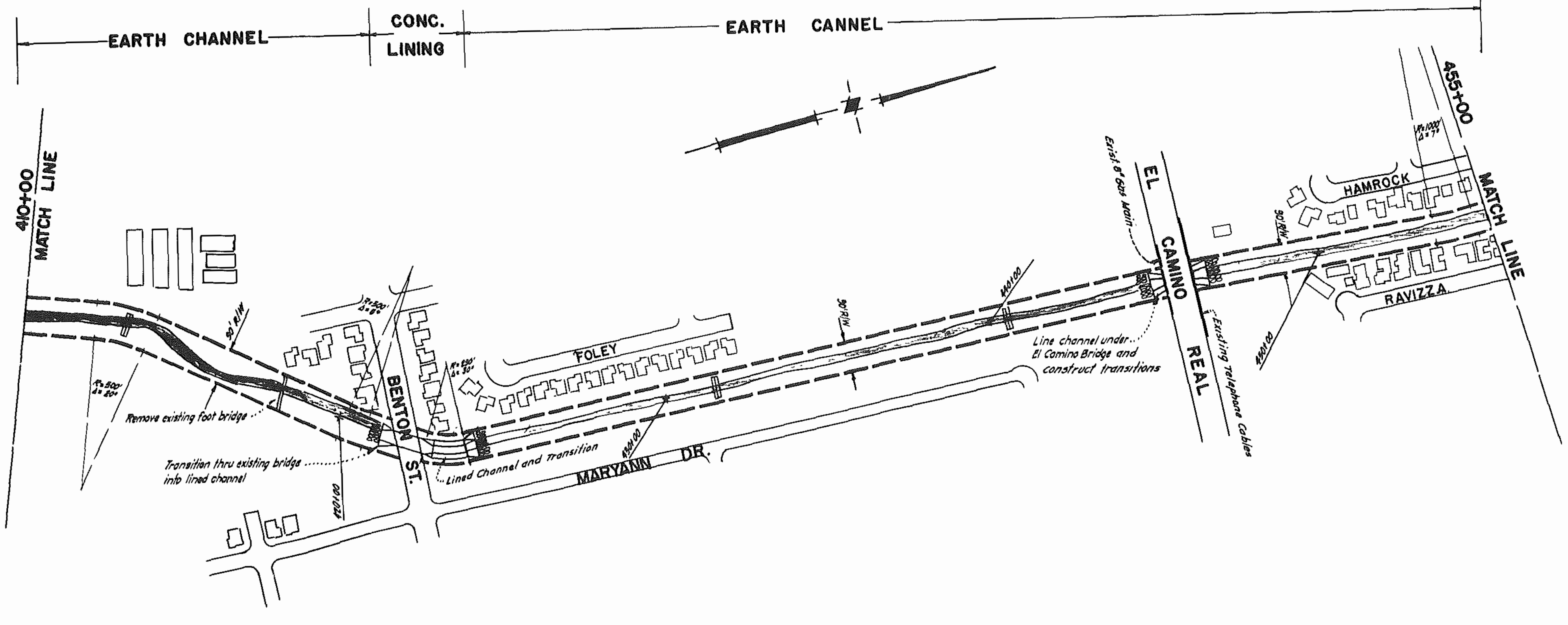
PROFILE



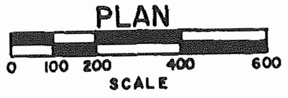
TYPICAL UNLINED CHANNEL SECTION



LINED CHANNEL SECTION AT BENTON STREET AND THROUGH EL CAMINO BRIDGE


EARTH CHANNEL
CONC. LINING
EARTH CANNEL
410+00 MATCH LINE
Remove existing foot bridge
Transition thru existing bridge into lined channel
BENTON ST.
Lined Channel and Transition
FOLEY
MARYANN DR.
90' R/W
Line channel under El Camino Bridge and construct transitions
Exist. 8" Gas Main
EL CAMINO REAL
Existing Telephone Cables
HAMROCK
RAVIZZA
455+00
MATCH LINE
420+00
430+00
440+00
450+00

PLAN



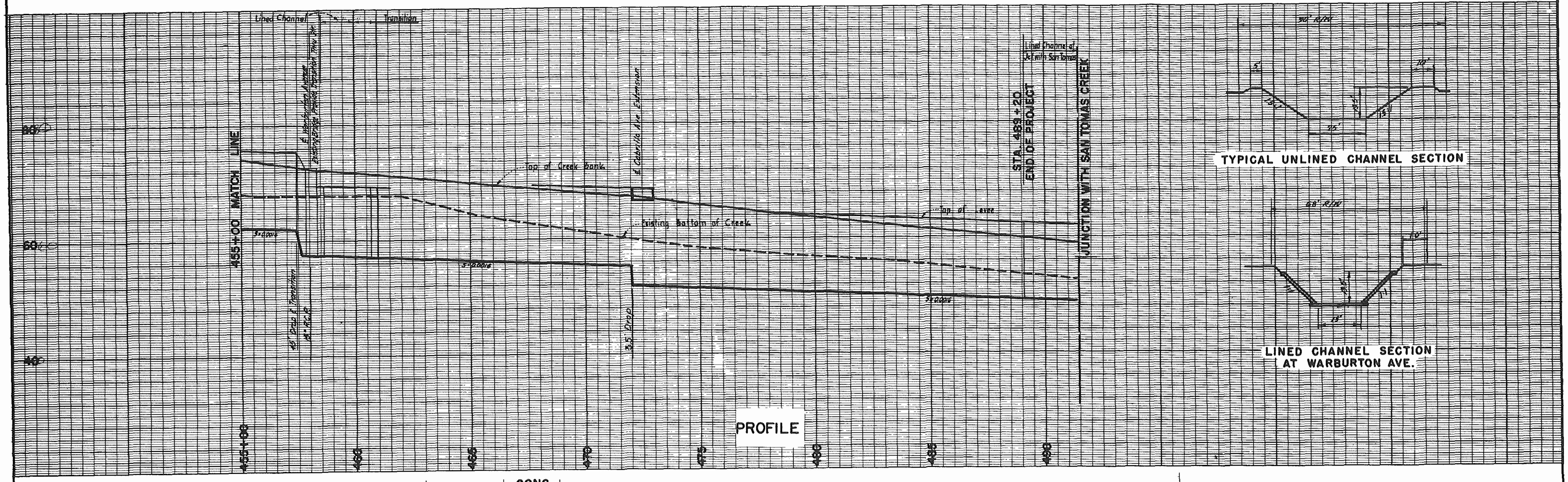
MAP & GENERAL CONSTRUCTION PLANS FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-3
SARATOGA CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL By George H. Prime GEORGE H PRIME SUPERVISING ENGINEER	Design By CBC&DP Checked By CBC&DP	SCALE: As Shown
	Drawn By VK	JOB NO. 1316
APPROVED FOR DEPT. OF PUBLIC WORKS By James B. Enochs JAMES B. ENOCHS DIRECTOR	GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF.	SHEET 9 OF 10
	Date JAN 7 1961	

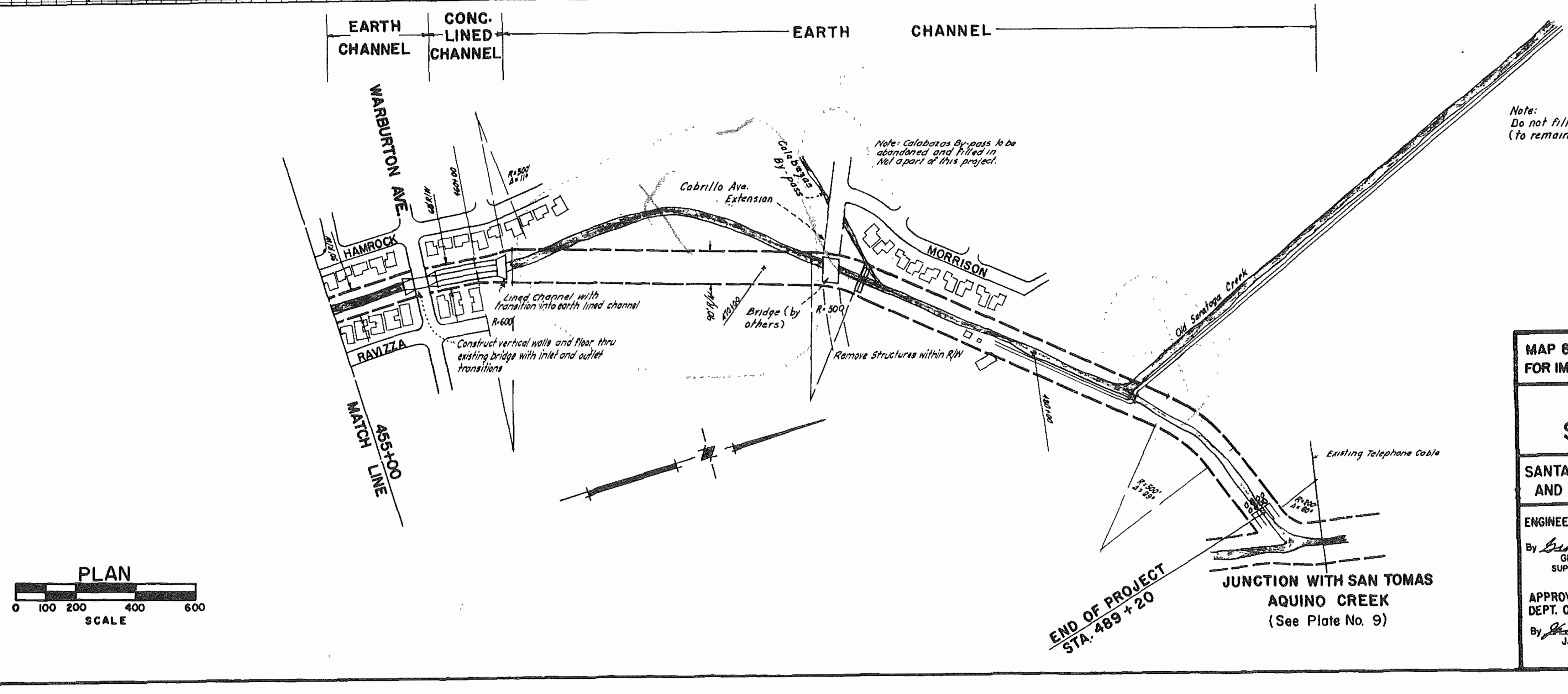
PLATE 21



TYPICAL UNLINED CHANNEL SECTION

LINED CHANNEL SECTION
AT WARBURTON AVE.

PROFILE


EARTH CHANNEL
CONC. LINED CHANNEL
EARTH CHANNEL
WARBURTON AVE.
HAMROCK
RAVIZZA
MORRISON
90' R/W
68' R/W
460+00
R=500
Δ=11°
Lined Channel with transition into earth lined channel
R=600
Construct vertical walls and floor thru existing bridge with inlet and outlet transitions
Cabrillo Ave. Extension
Calabazas By-pass
Note: Calabazas By-pass to be abandoned and filled in. Not a part of this project.
90' R/W
470+00
Bridge (by others)
R=500
Remove Structures within R/W
480+00
Old Saratoga Creek
R=500'
Δ=23°
R=500'
Δ=60°
Existing Telephone Cable
455+00 MATCH LINE
END OF PROJECT STA. 489+20
JUNCTION WITH SAN TOMAS AQUINO CREEK
(See Plate No. 9)
0
100
200
400
600
SCALE

PLAN

Note:
Do not fill natural channel of Saratoga Creek, (to remain open for local drainage)

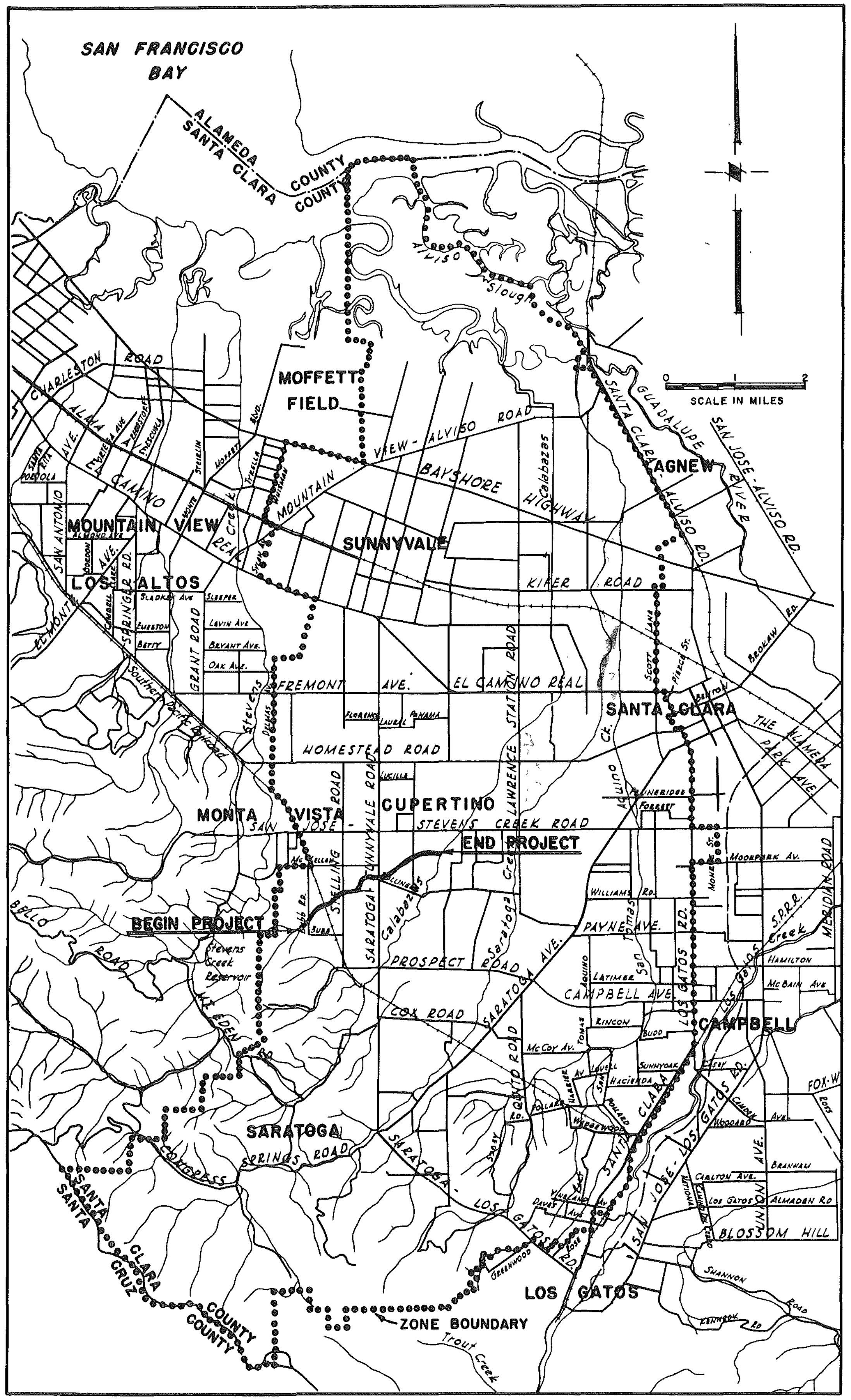
MAP & GENERAL CONSTRUCTION PLANS FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-3
SARATOGA CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL By George H. Prime GEORGE H. PRIME SUPERVISING ENGINEER	Design By CBC EDP Checked By CBC EDP	SCALE: As Shown
	Drawn By VK	JOB NO. 1316
APPROVED FOR DEPT. OF PUBLIC WORKS By James B. Enochs JAMES B. ENOCHS DIRECTOR	GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF.	SHEET 10 OF 10
	Date JAN. 7, 1961	

PLATE 22



MAP AND GENERAL CONSTRUCTION PLANS

OF

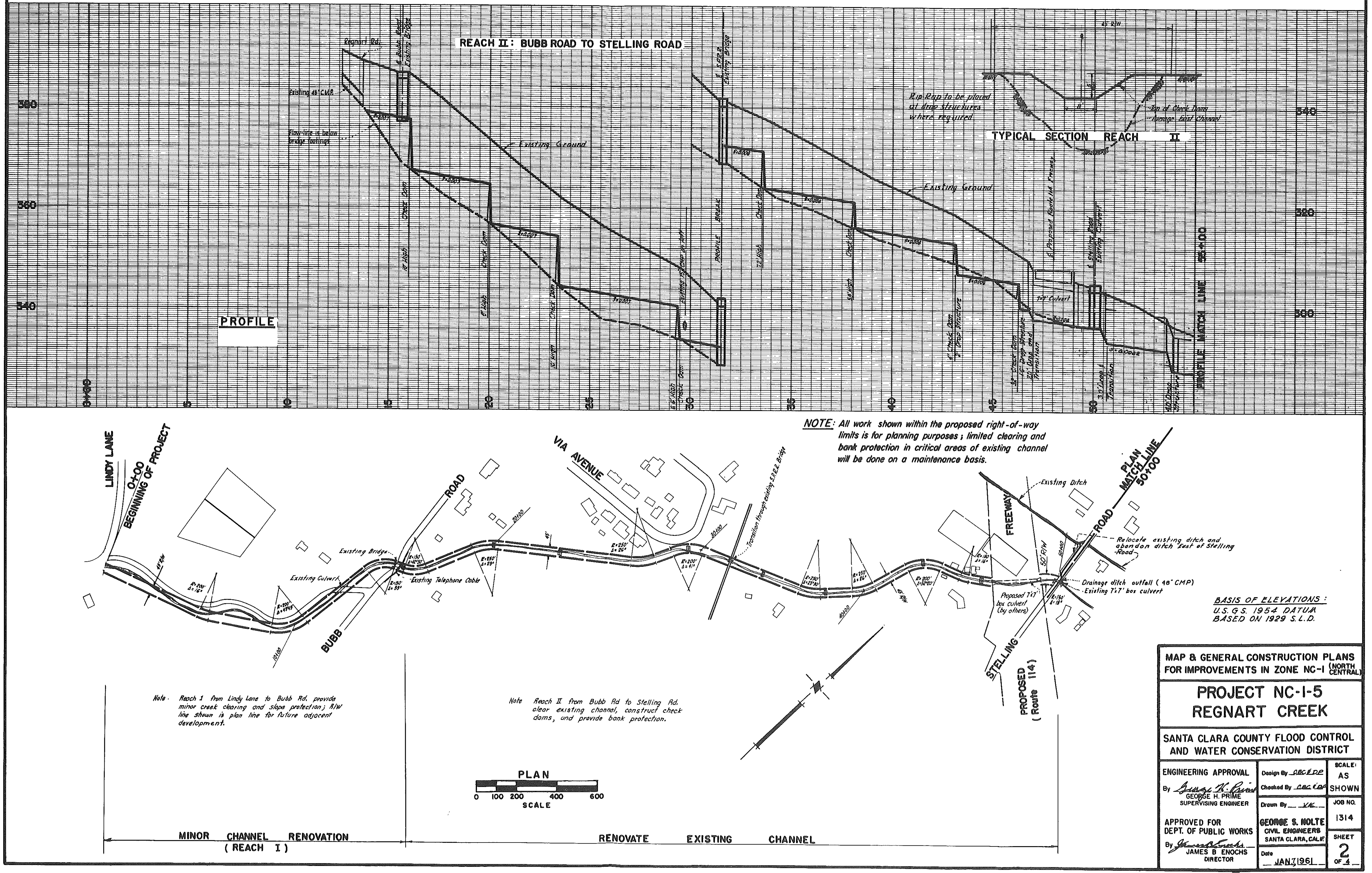
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 5

REGNART CREEK IMPROVEMENT

LINDY LANE TO CALABAZAS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA CLARA COUNTY, CALIFORNIA



NOTE: All work shown within the proposed right-of-way limits is for planning purposes; limited clearing and bank protection in critical areas of existing channel will be done on a maintenance basis.

Note. Reach I from Lindy Lane to Bubb Rd. provide minor creek clearing and slope protection; R/W line shown is plan line for future adjacent development.

Note Reach II from Bubb Rd to Stelling Rd. clear existing channel, construct check dams, and provide bank protection.

BASIS OF ELEVATIONS:
U.S.G.S. 1954 DATUM
BASED ON 1929 S.L.D.

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-5
REGNART CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
By George H. Prime
GEORGE H. PRIME
SUPERVISING ENGINEER

APPROVED FOR
DEPT. OF PUBLIC WORKS
By James B Enochs
JAMES B ENOCHS
DIRECTOR

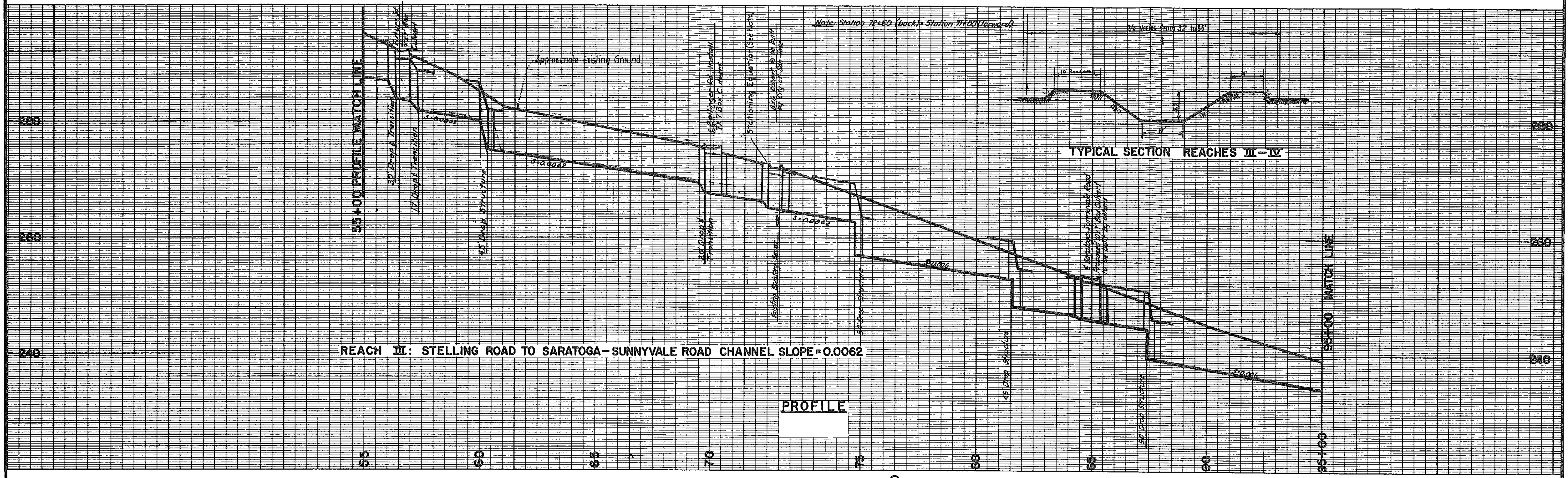
Design By GBC & DP
Checked By GBC & DP
Drawn By VK

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.

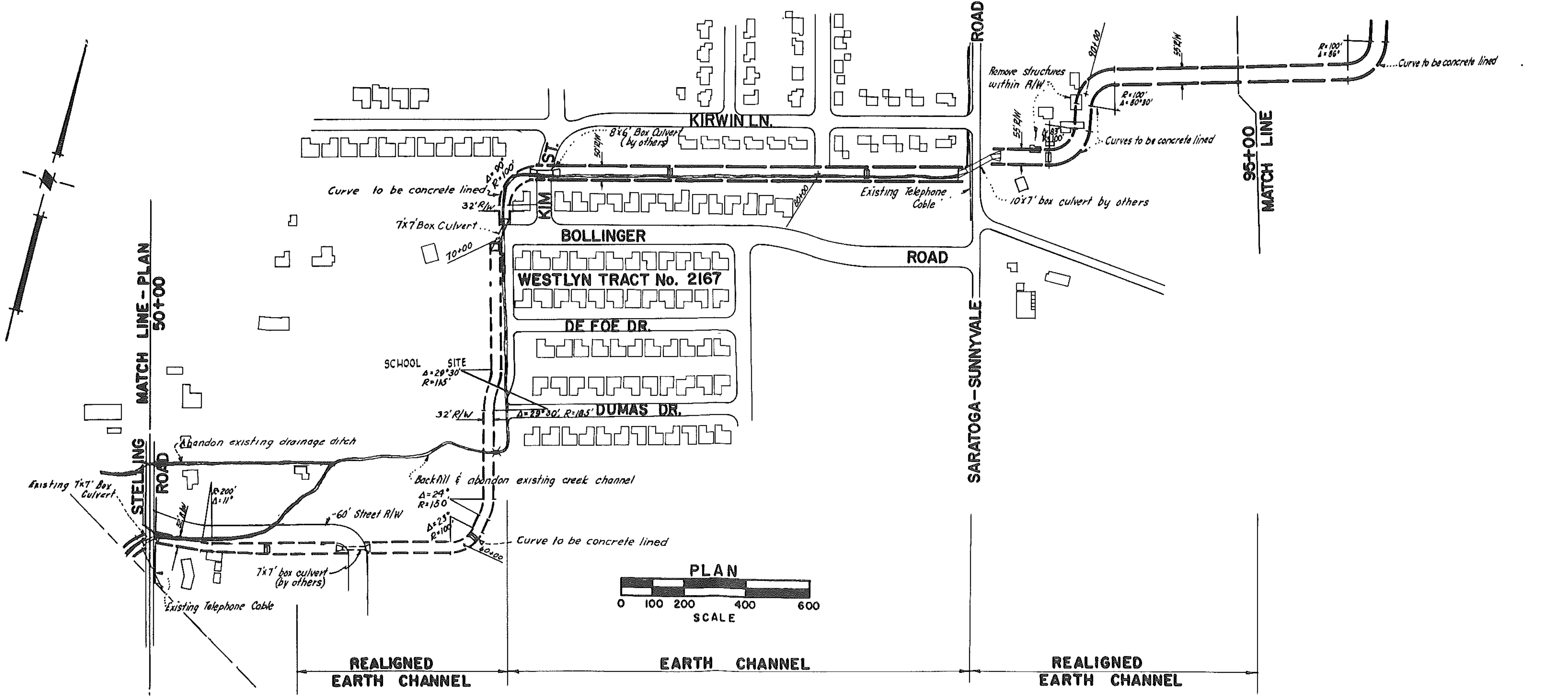
Date JAN 3 1961

SCALE: AS SHOWN
JOB NO. 1314
SHEET 2 OF 4

PLATE 24


55+00 PROFILE MATCH LINE
30' Drop & Transition
Future St. 9'x7' Box Culvert
10' Drop & Transition
S=0.0062
40' Drop Structure
Approximate Existing Ground
S=0.0062
℄ Bollinger Rd. Install 7'x7' Box Culvert
20' Drop & Transition
Stationing Equation (See Note)
8'x6' Culvert to be built by City of San Jose
Existing Sanitary Sewer
S=0.0062
50' Drop Structure
Note: Station 72+60 (back) = Station 71+00 (forward)
S=0.006
45' Drop Structure
℄ Saratoga-Sunnyvale Road Proposed 10'x7' Box Culvert to be built by others
50' Drop Structure
S=0.006
95+00 MATCH LINE
R/W varies from 32' to 55'
10' Roadway
1½:1
1½:1
8'
8'
6.7'
TYPICAL SECTION REACHES III–IV
REACH III: STELLING ROAD TO SARATOGA–SUNNYVALE ROAD CHANNEL SLOPE = 0.0062
280
260
240
55
60
65
70
75
80
85
90
95+00

PROFILE



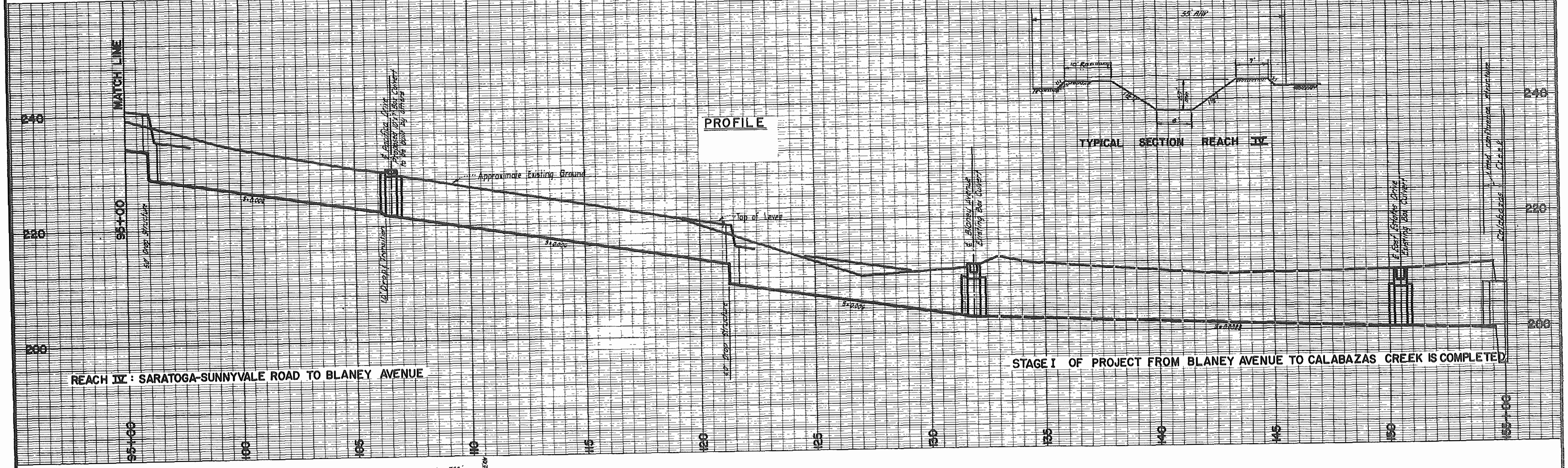
PLAN

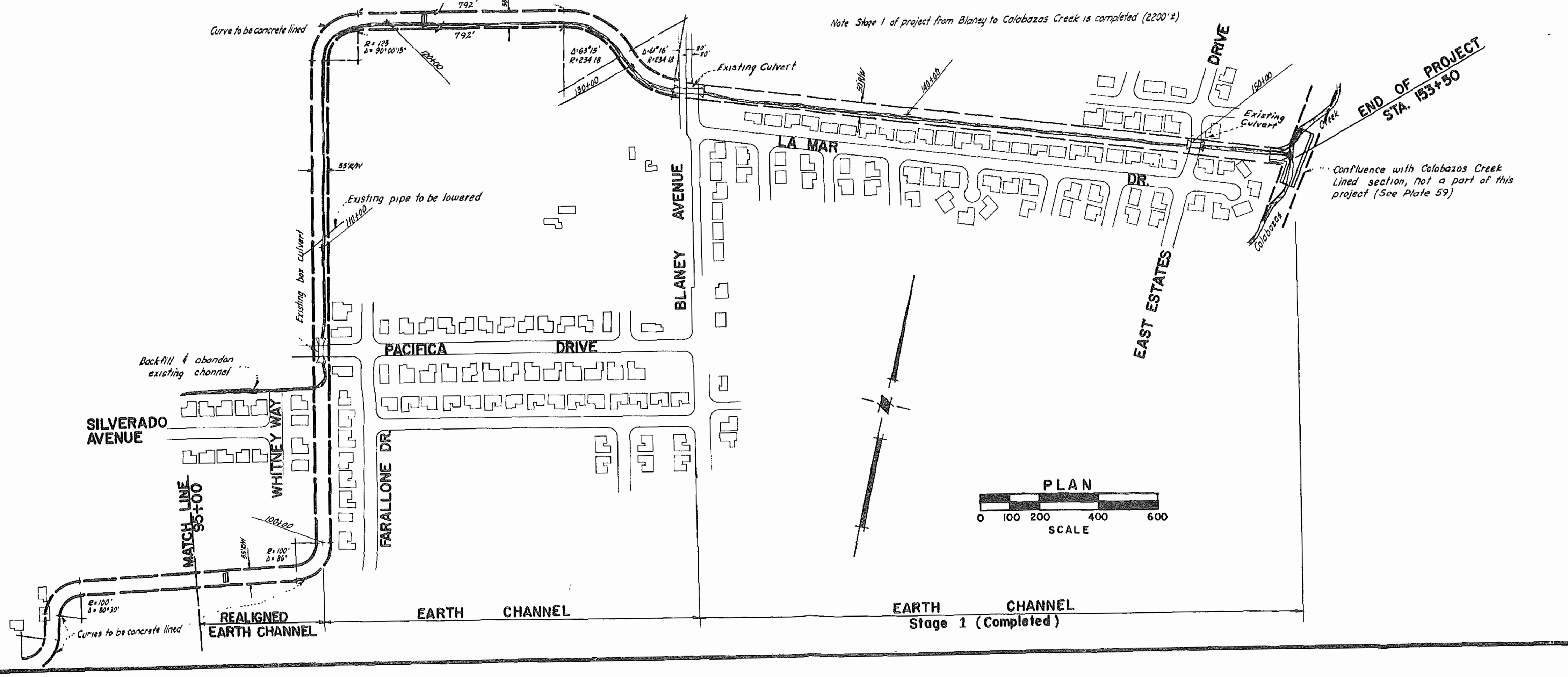
MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-I (NORTH CENTRAL)

PROJECT NC-I-5
REGNART CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL By George H. Prime GEORGE H PRIME SUPERVISING ENGINEER	Design By CBC & DP Checked By CBC & DP	SCALE: AS SHOWN
	Drawn By VK	JOB NO. 1314
APPROVED FOR DEPT. OF PUBLIC WORKS By James B. Enochs JAMES B. ENOCHS DIRECTOR	GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF.	SHEET 3 OF 4
	Date JAN 7, 1961	


MATCH LINE
95+00
PROFILE
TYPICAL SECTION REACH IV
55' R/W
10' Roadway
7'
6'
Approximate Existing Ground
Top of Levee
E Pacifica Drive Proposed 10'x8' Box Culvert to be built by others
E Blaney Avenue Existing Box Culvert
E East Estates Drive Existing Box Culvert
Lined confluence structure Calabazas Creek
5' Drop Structure
10' Drop Structure
S=0.002
REACH IV : SARATOGA-SUNNYVALE ROAD TO BLANEY AVENUE
STAGE I OF PROJECT FROM BLANEY AVENUE TO CALABAZAS CREEK IS COMPLETED
240
220
200
95+00
100
105
110
115
120
125
130
135
140
145
150
153+50


Curve to be concrete lined
792'
R=125
Existing Culvert
Note Stage I of project from Blaney to Calabazas Creek is completed (2200'±)
END OF PROJECT STA. 153+50
Existing Culvert
Confluence with Calabazas Creek Lined section, not a part of this project (See Plate 59)
Existing pipe to be lowered
Existing box culvert
Backfill & abandon existing channel
LA MAR DR.
DRIVE
EAST ESTATES
BLANEY AVENUE
PACIFICA DRIVE
SILVERADO AVENUE
WHITNEY WAY
FARALLONE DR
MATCH LINE 95+00
Curves to be concrete lined
REALIGNED EARTH CHANNEL
EARTH CHANNEL
EARTH CHANNEL
Stage 1 (Completed)
Calabazas
Creek
PLAN
0 100 200 400 600
SCALE

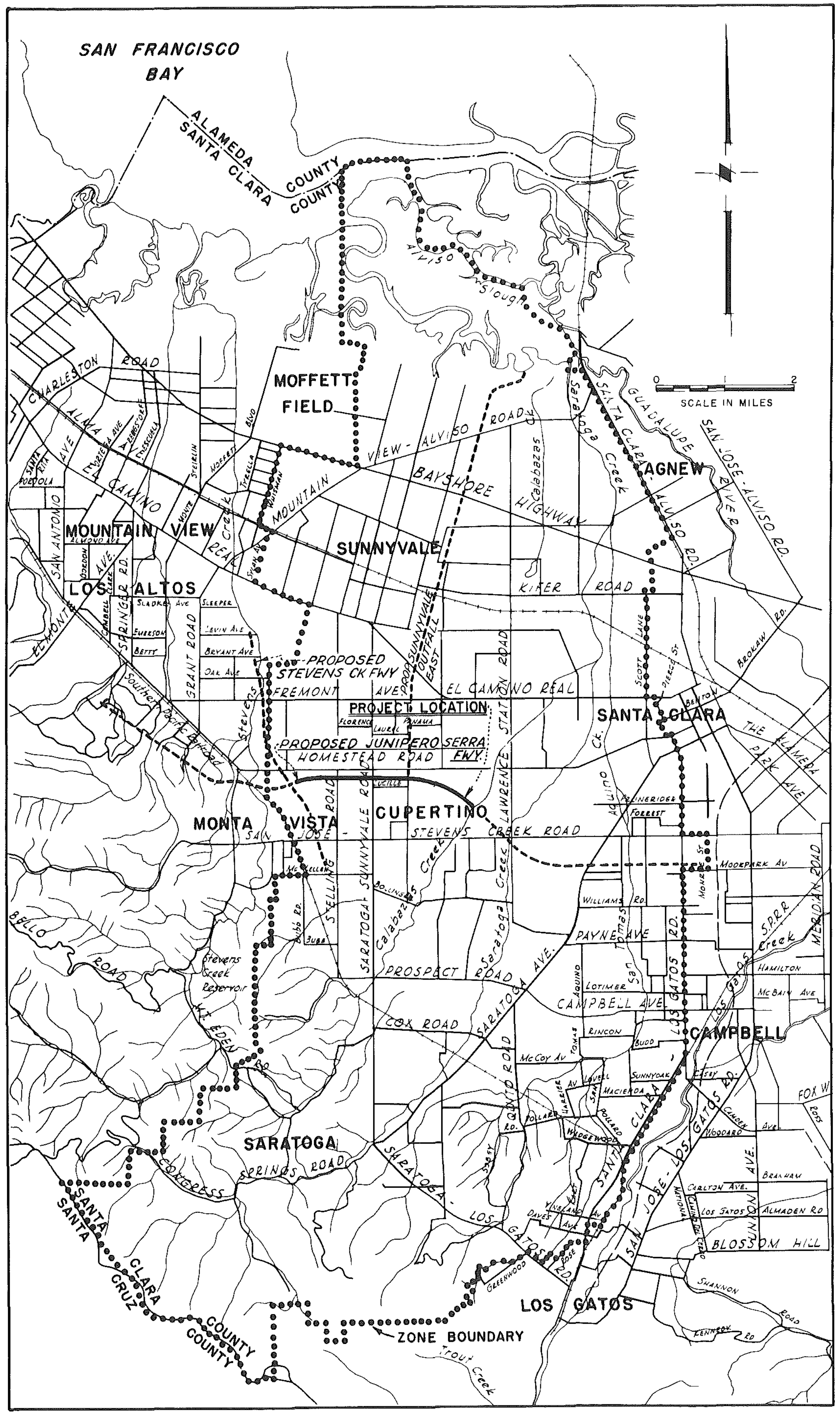
MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-5
REGNART CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL By Geo H Prime GEORGE H PRIME SUPERVISING ENGINEER	Design By CBC & DD Checked By CBC & DP	SCALE: AS SHOWN
APPROVED FOR DEPT. OF PUBLIC WORKS By James B Enochs JAMES B ENOCHS DIRECTOR	Drawn By VK GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF	JOB NO 1314
	Date JAN 7 1961	SHEET 4 OF 4

PLATE 26



MAP AND GENERAL CONSTRUCTION PLANS

OF

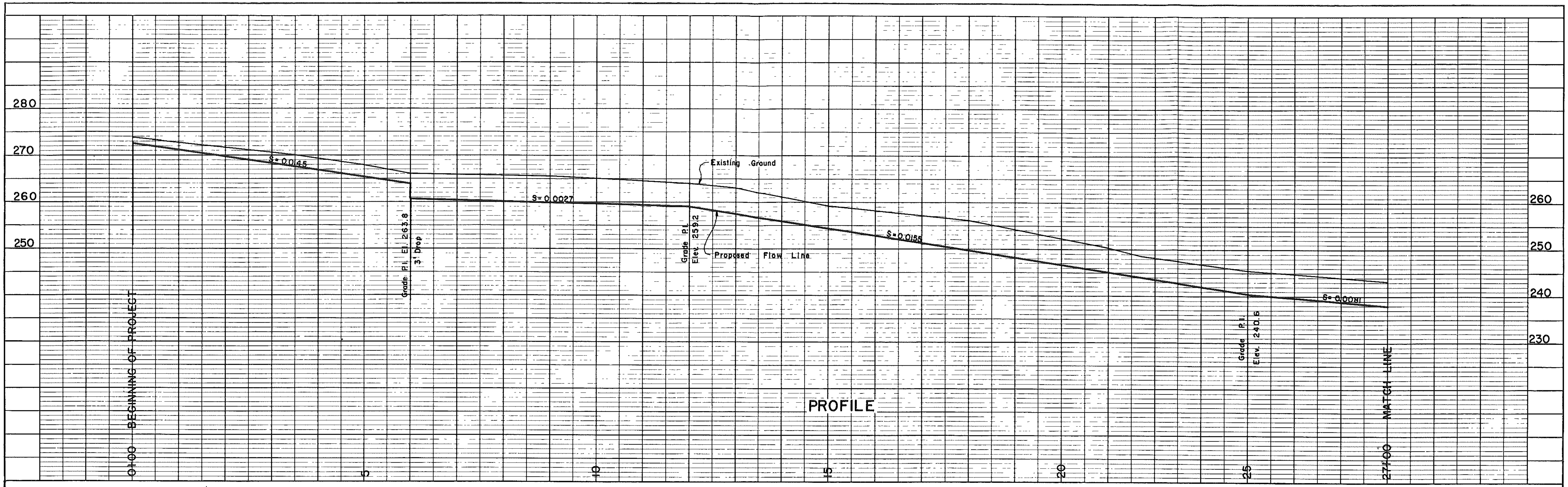
ZONE NC-I (NORTH CENTRAL) PROJECT NO. 24

JUNIPERO SERRA CHANNEL

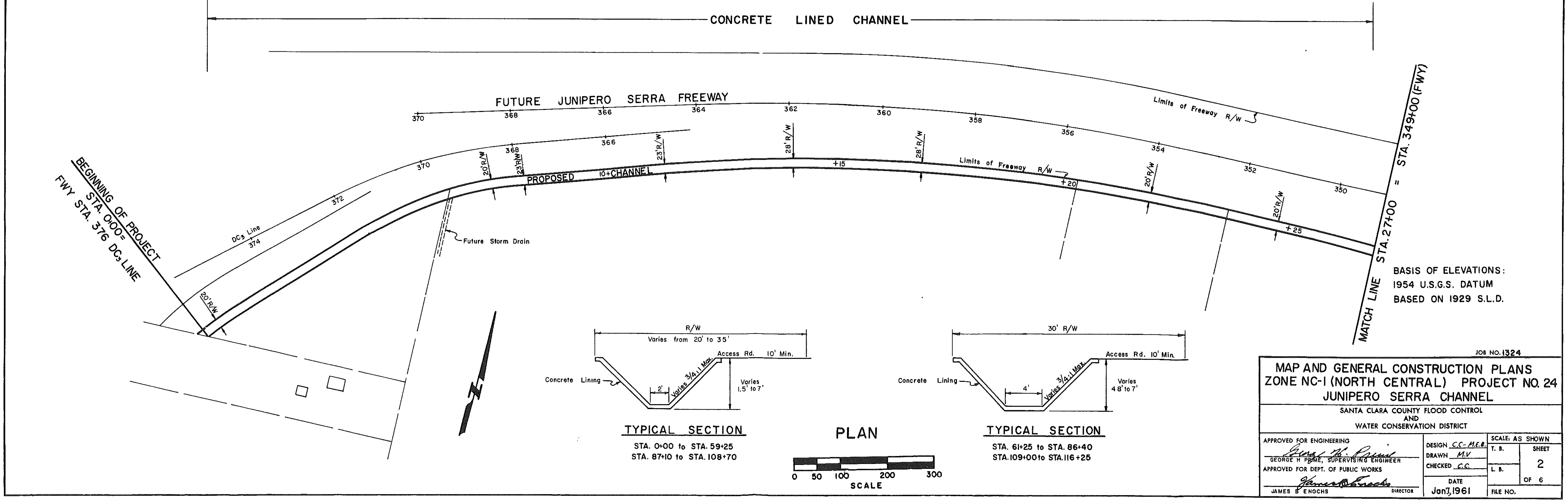
FROM 3400' WEST OF STELLING RD. TO CALABAZAS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA CLARA COUNTY, CALIFORNIA



PROFILE



BASIS OF ELEVATIONS:
1954 U.S.G.S. DATUM
BASED ON 1929 S.L.D.

TYPICAL SECTION
STA. 0+00 to STA. 59+25
STA. 87+10 to STA. 108+70

PLAN

TYPICAL SECTION
STA. 61+25 to STA. 86+40
STA. 109+00 to STA. 116+25

JOB NO. 1324

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 24
JUNIPERO SERRA CHANNEL

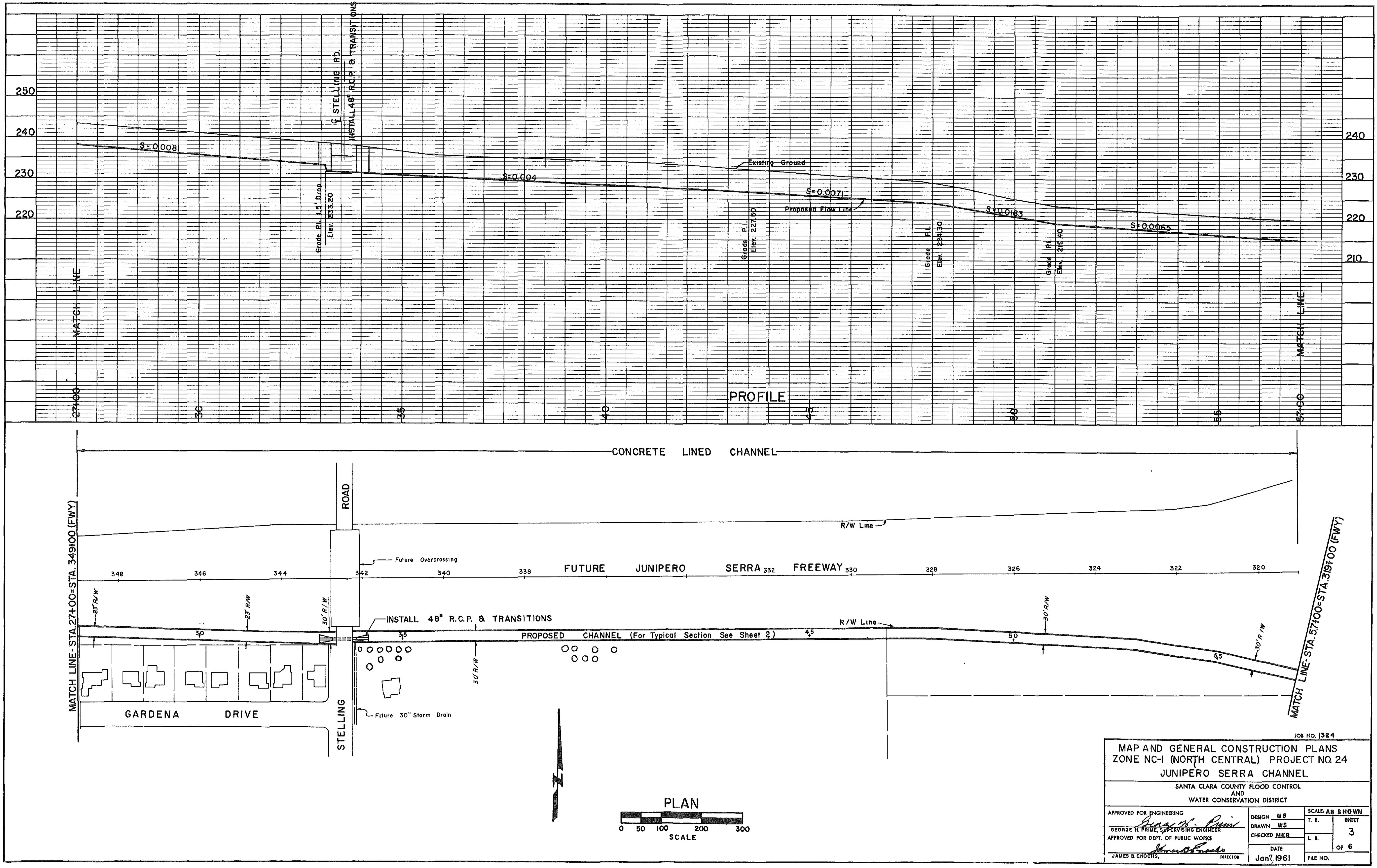
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Prime
GEORGE H PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B Enochs
JAMES B ENOCHS DIRECTOR

DESIGN C.C.-M.E.B.
DRAWN M.V
CHECKED C.C.
DATE
Jan 3, 1961

SCALE: AS SHOWN
T. B.
L. B.
SHEET 2 OF 6
FILE NO.

PLATE 28



JOB NO. 1324

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 24
JUNIPERO SERRA CHANNEL

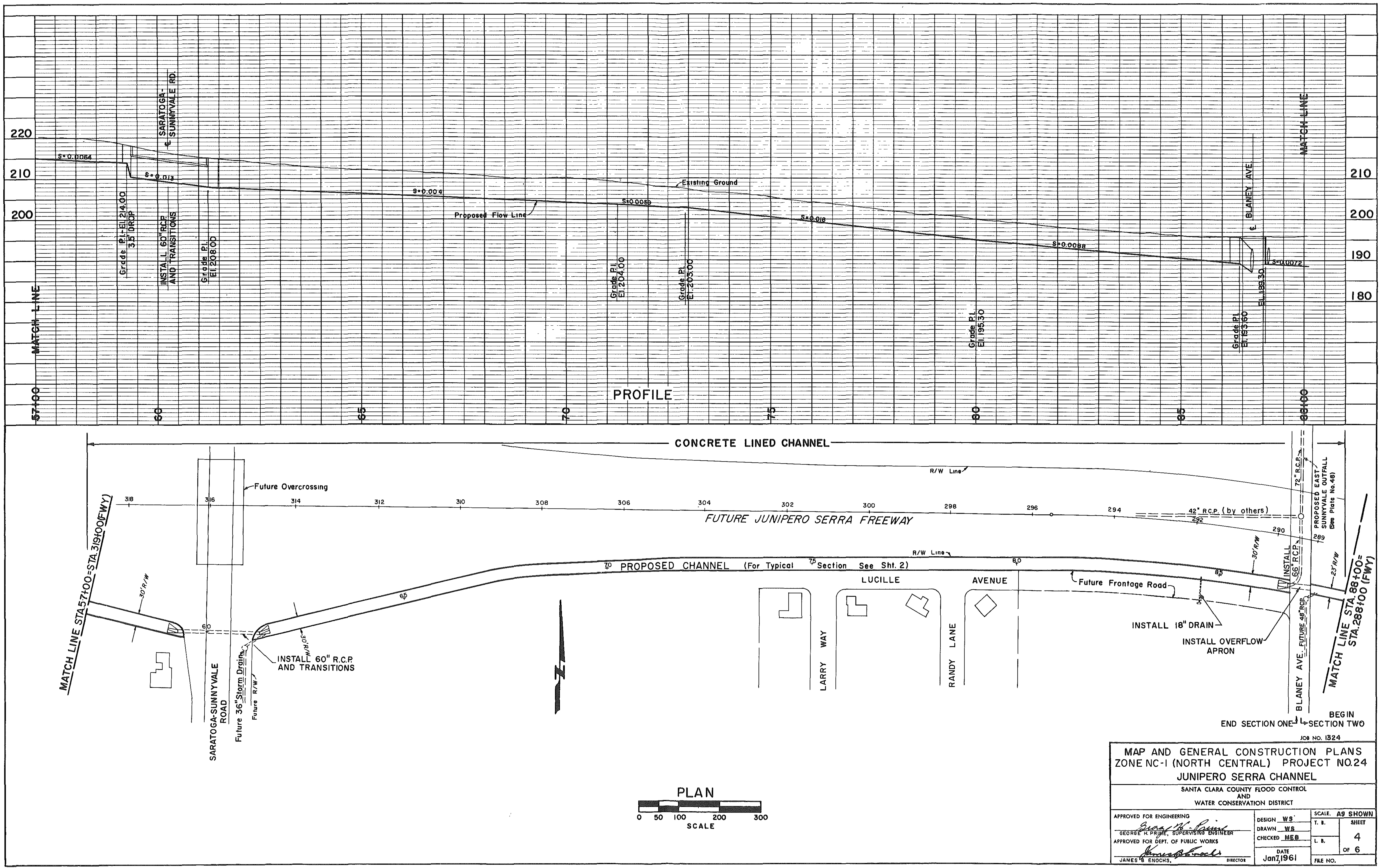
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS, DIRECTOR

DESIGN WS
DRAWN WS
CHECKED MEB
DATE Jan 7, 1961

SCALE: AS SHOWN
T. B.
L. B.
SHEET 3 OF 6
FILE NO.

PLATE 29



JOB NO. 1324

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO.24
JUNIPERO SERRA CHANNEL

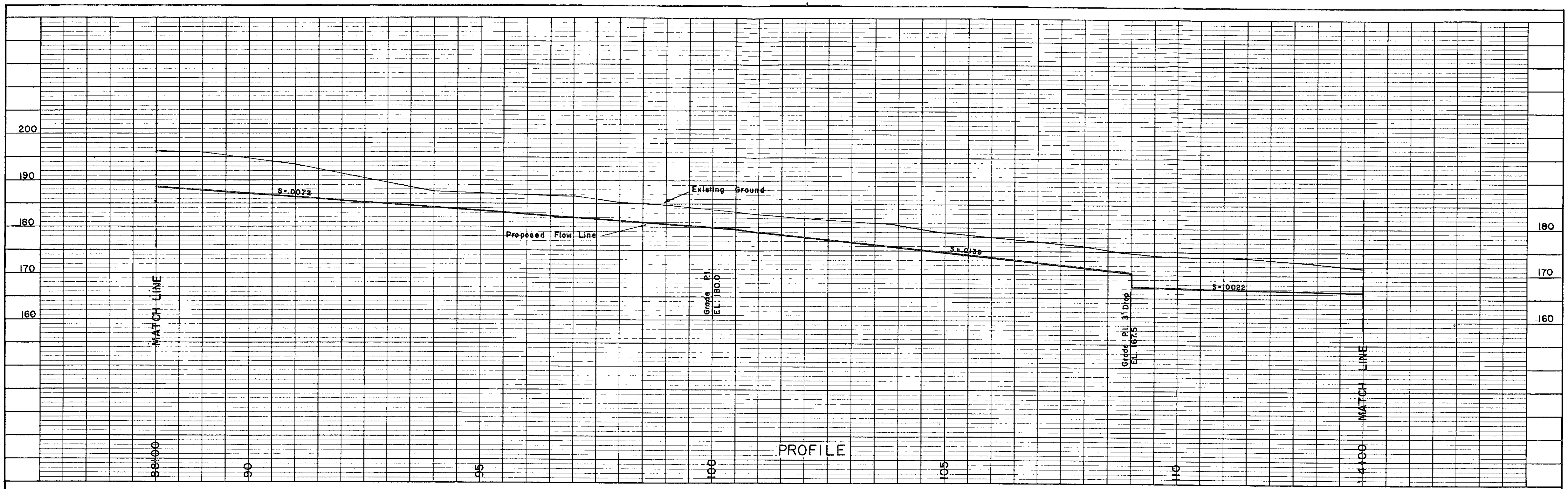
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

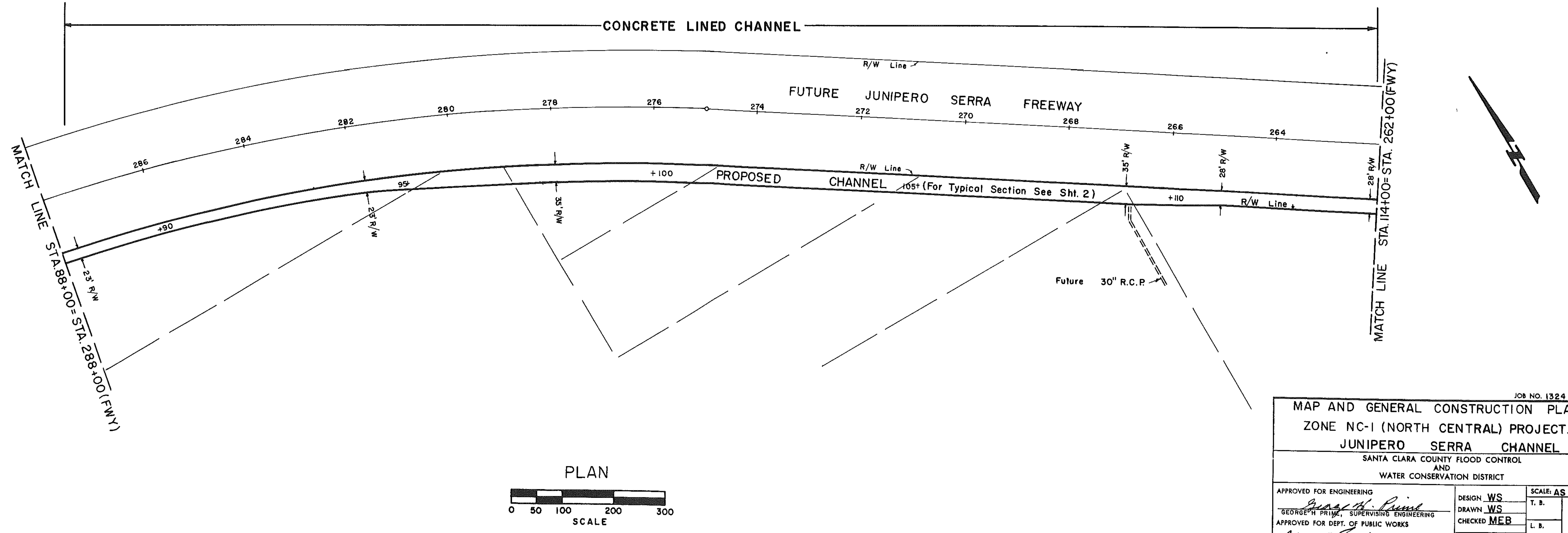
APPROVED FOR ENGINEERING
George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B ENOCHS, DIRECTOR

DESIGN WS
DRAWN WS
CHECKED MEB
DATE Jan7,1961

SCALE. AS SHOWN
T. B.
L. B.
SHEET 4 OF 6
FILE NO.

PLATE 30





JOB NO. 1324

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT. No. 24
JUNIPERO SERRA CHANNEL

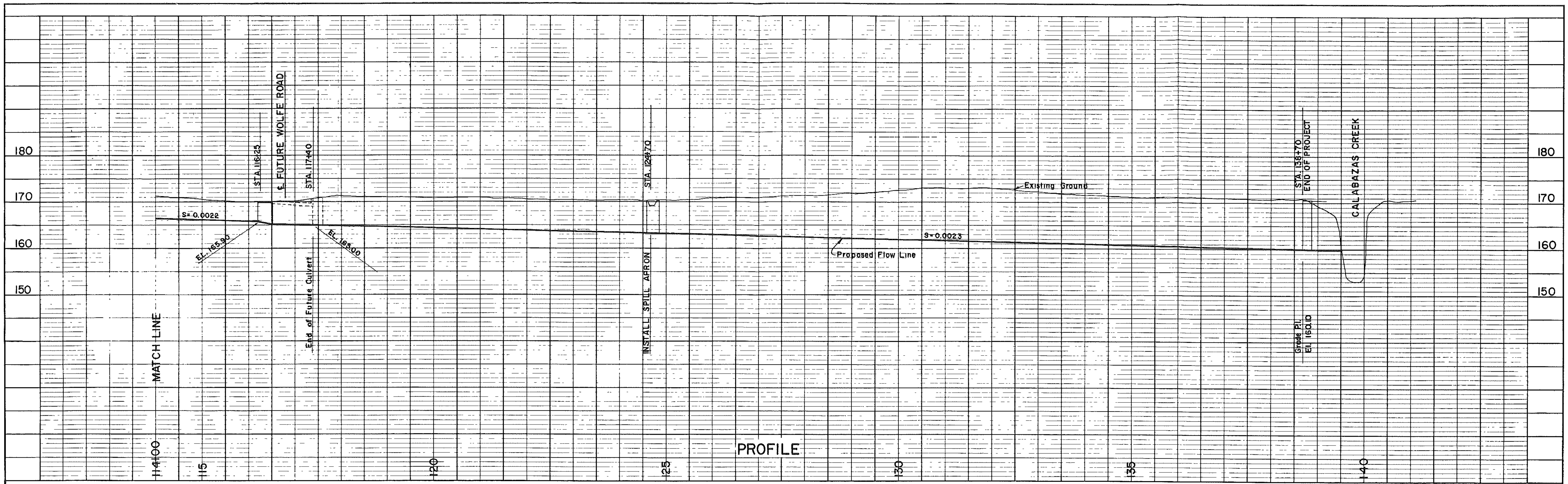
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEERING
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS DIRECTOR

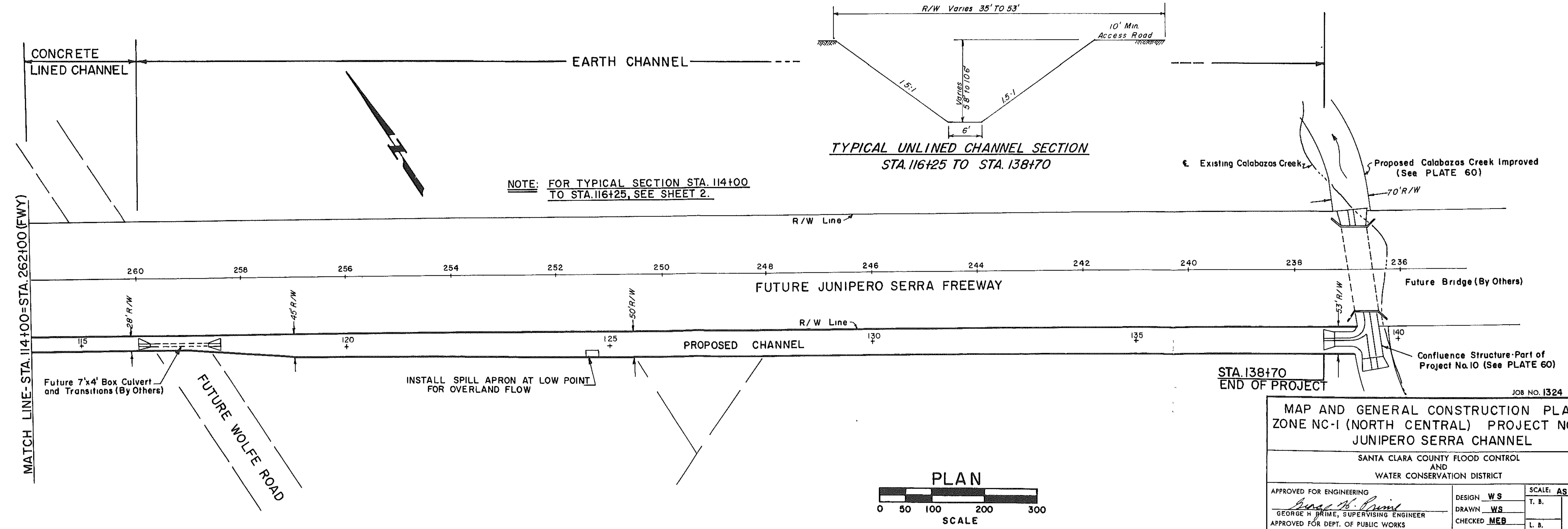
DESIGN WS
DRAWN WS
CHECKED MEB
DATE Jan 7, 1961

SCALE: AS SHOWN
T. B.
L. B.
SHEET 5 OF 6
FILE NO.

PLATE 31



PROFILE


CONCRETE
LINED CHANNEL
EARTH CHANNEL
R/W Varies 35' TO 53'
10' Min.
Access Road
1.5:1
Varies 5.8' to 10.6'
1.5:1
6'
R/W Line
260
258
256
254
252
250
248
246
244
242
240
238
236
FUTURE JUNIPERO SERRA FREEWAY
28' R/W
45' R/W
50' R/W
53' R/W
70' R/W
R/W Line
115
120
125
130
135
140
PROPOSED CHANNEL
MATCH LINE-STA. 114+00=STA. 262+00 (FWY)
Future 7'x4' Box Culvert and Transitions (By Others)
FUTURE WOLFE ROAD
INSTALL SPILL APRON AT LOW POINT FOR OVERLAND FLOW
℄ Existing Calabazas Creek
Proposed Calabazas Creek Improved (See PLATE 60)
Future Bridge (By Others)
Confluence Structure-Part of Project No. 10 (See PLATE 60)
STA. 138+70
END OF PROJECT
0 50 100 200 300
SCALE

TYPICAL UNLINED CHANNEL SECTION
STA. 116+25 TO STA. 138+70

NOTE: FOR TYPICAL SECTION STA. 114+00 TO STA. 116+25, SEE SHEET 2.

PLAN

JOB NO. 1324

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 24
JUNIPERO SERRA CHANNEL

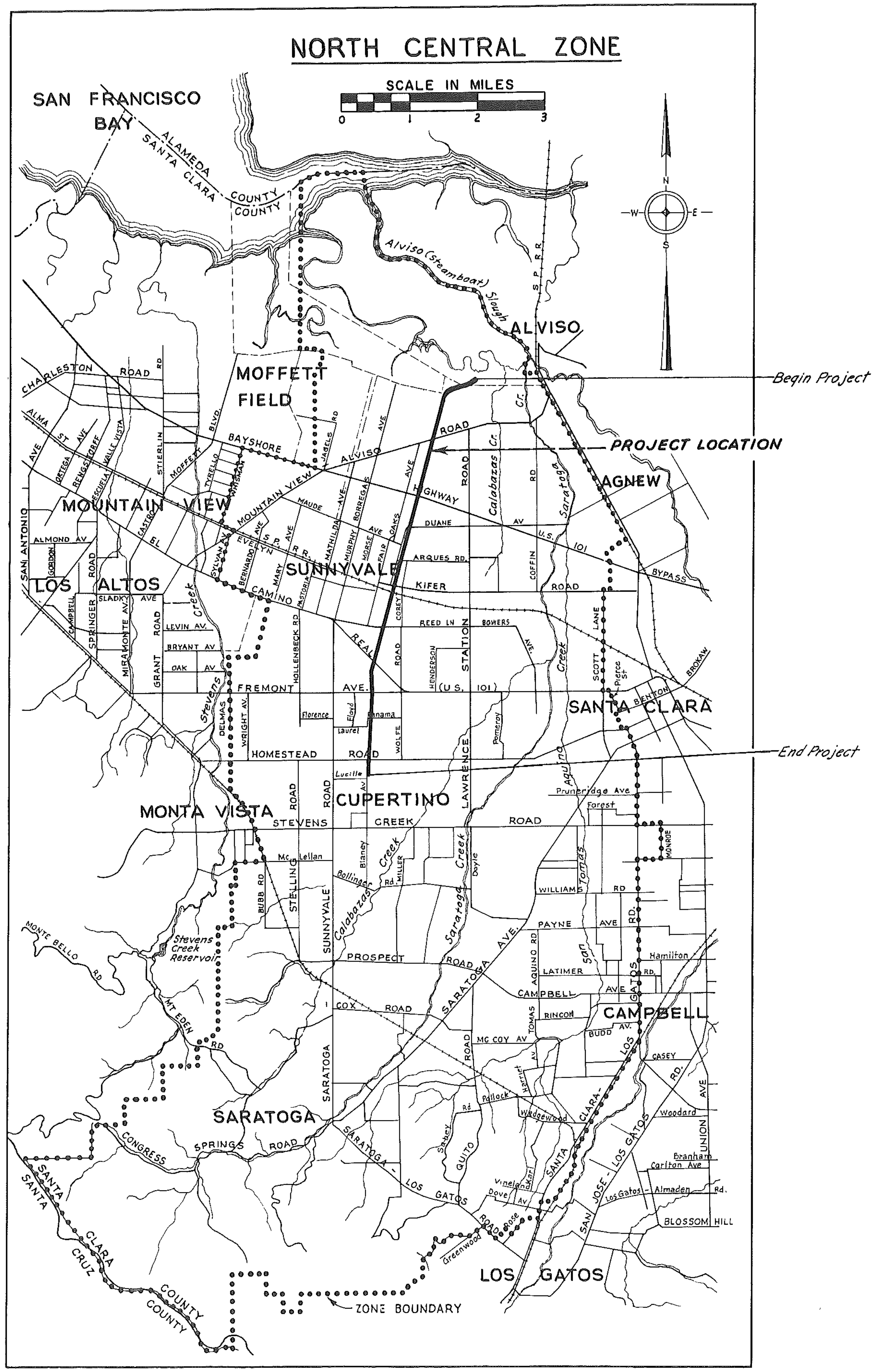
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Brime
GEORGE H BRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B ENOCHS, DIRECTOR

DESIGN WS
DRAWN WS
CHECKED MEB
DATE Jan 7, 1961

SCALE: AS SHOWN
T. B.
L. B.
SHEET 6 OF 6
FILE NO.

PLATE 32



MAP AND GENERAL CONSTRUCTION PLANS

OF

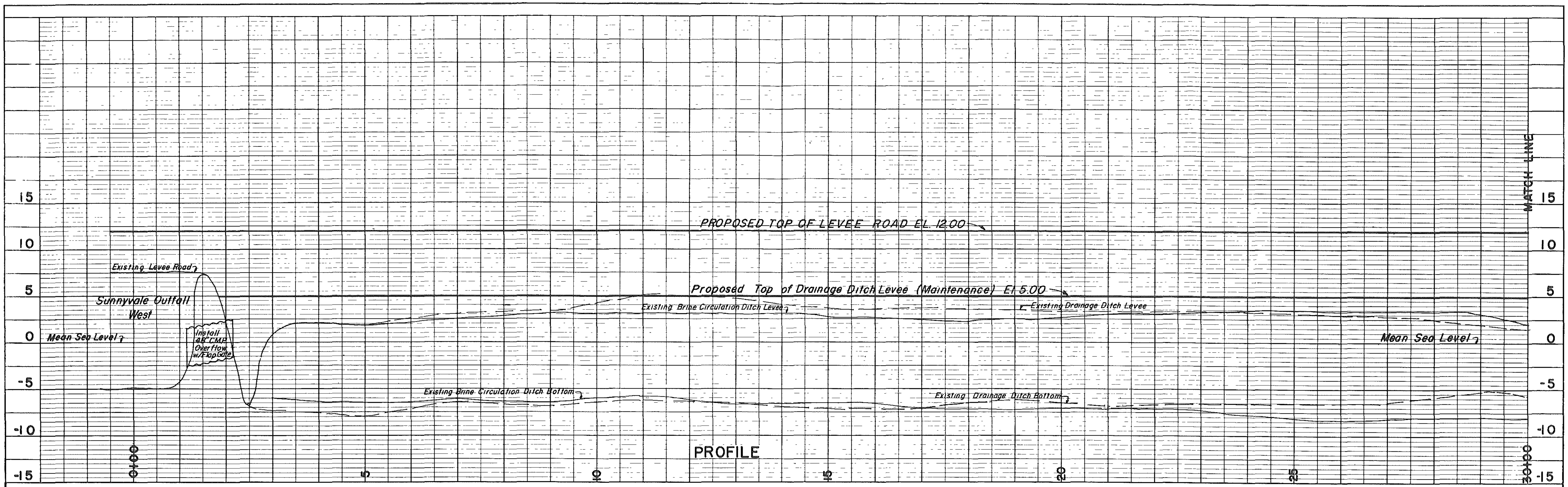
ZONE N.C.-1 "NORTH CENTRAL", PROJECT NO. 6

CONSTRUCTION OF SUNNYVALE OUTFALL (E.)

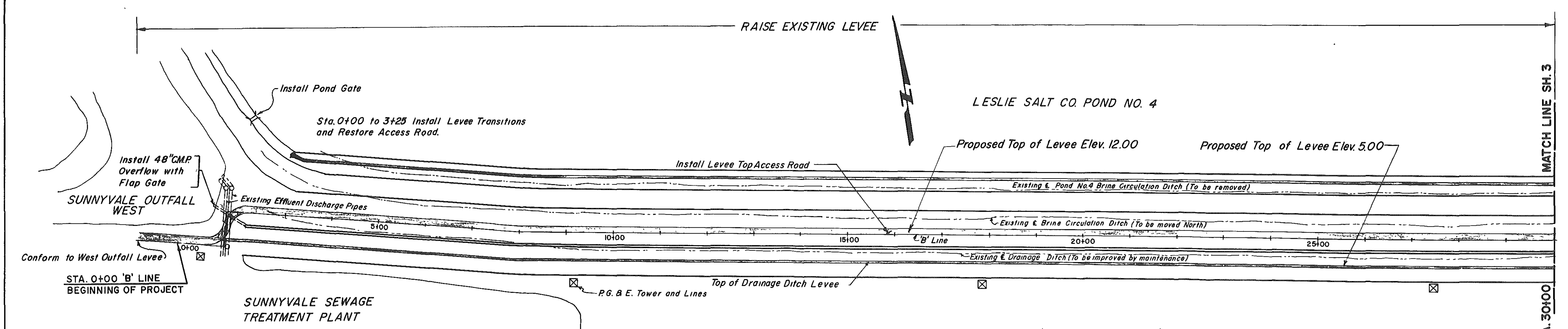
FROM 285' NORTH OF LUCILLE AVE. TO GUADALUPE SLOUGH

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA CLARA COUNTY, CALIFORNIA

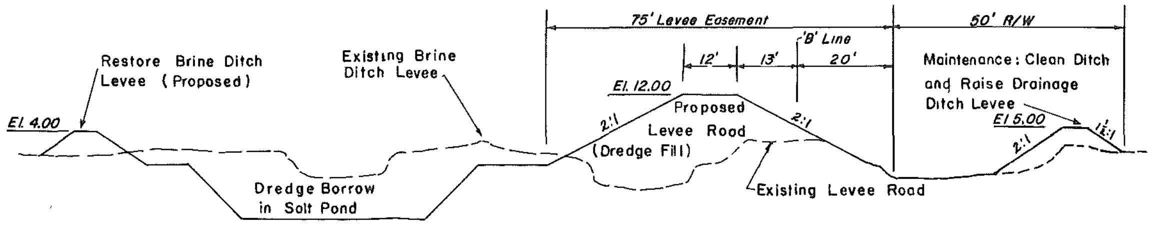


PROFILE


RAISE EXISTING LEVEE
N
LESLIE SALT CO. POND NO. 4
Install Pond Gate
Sta. 0+00 to 3+25 Install Levee Transitions and Restore Access Road.
Install 48" C.M.P. Overflow with Flap Gate
SUNNYVALE OUTFALL WEST
Existing Effluent Discharge Pipes
Proposed Top of Levee Elev. 12.00
Proposed Top of Levee Elev. 5.00
Install Levee Top Access Road
Existing ℄ Pond No. 4 Brine Circulation Ditch (To be removed)
Existing ℄ Brine Circulation Ditch (To be moved North)
Existing ℄ Drainage Ditch (To be improved by maintenance)
'B' Line
0+00
5+00
10+00
15+00
20+00
25+00
Conform to West Outfall Levee
STA. 0+00 'B' LINE BEGINNING OF PROJECT
Top of Drainage Ditch Levee
P.G. & E. Tower and Lines
SUNNYVALE SEWAGE TREATMENT PLANT
MATCH LINE SH. 3
STA. 30+00

PLAN

0 50 100 200 300
SCALE


75' Levee Easement
50' R/W
'B' Line
12'
13'
20'
El. 12.00
El. 4.00
El 5.00
2:1
2:1
2:1
1½:1
Restore Brine Ditch Levee (Proposed)
Existing Brine Ditch Levee
Proposed Levee Road (Dredge Fill)
Maintenance: Clean Ditch and Raise Drainage Ditch Levee
Dredge Borrow in Salt Pond
Existing Levee Road

TYPICAL SECTION

Sta. 3+25 to 43+20

NOTE: BENCH MARK DATUM USED
1929 S.L.D. OF U.S.C. & G. SURVEY
OBSERVATION OF 1959

JOB NO. 1313

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 6
SUNNYVALE OUTFALL EAST

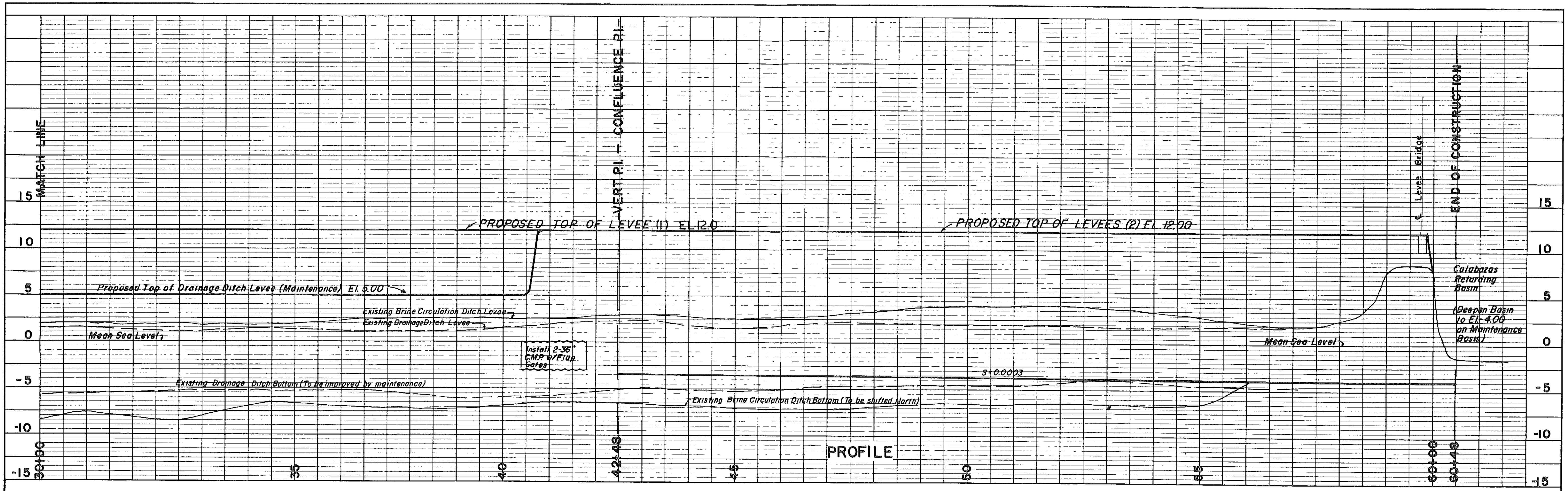
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

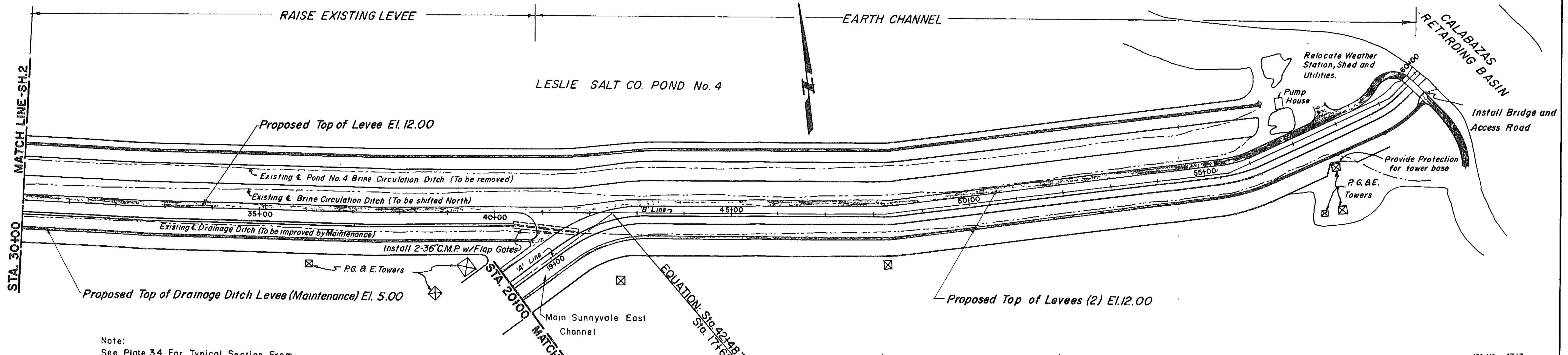
APPROVED FOR ENGINEERING
George H. Prime
GEORGE H PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS, DIRECTOR

DESIGN CC-MEB
DRAWN M.V
CHECKED C.C.
DATE
Jan. 7, 1961

SCALE: AS SHOWN
T-15
T&L-19
T&L-47
L-49
SHEET
2
OF 16
FILE NO.

PLATE 34

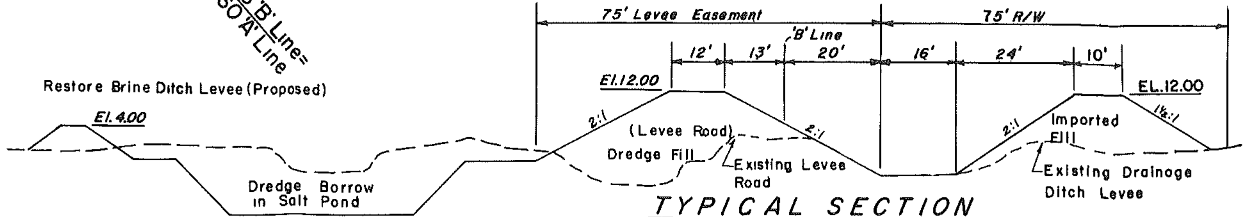



RAISE EXISTING LEVEE
EARTH CHANNEL
CALABAZAS RETARDING BASIN
LESLIE SALT CO. POND No. 4
Relocate Weather Station, Shed and Utilities.
Pump House
Install Bridge and Access Road
Provide Protection for tower base
P.G.&E. Towers
MATCH LINE-SH.2
Proposed Top of Levee El. 12.00
Existing ℄ Pond No. 4 Brine Circulation Ditch (To be removed)
Existing ℄ Brine Circulation Ditch (To be shifted North)
Existing ℄ Drainage Ditch (To be improved by Maintenance)
Install 2-36" C.M.P. w/Flap Gates
35+00
40+00
'B' Line
45+00
50+00
55+00
60+00
'A' Line
19+00
STA. 30+00
P.G. & E. Towers
STA. 20+00
MATCH LINE-SH.4
Main Sunnyvale East Channel
EQUATION: Sta. 42+48 'B' Line= Sta. 17+60 'A' Line
Proposed Top of Levees (2) El. 12.00
Proposed Top of Drainage Ditch Levee (Maintenance) El. 5.00

Note:
See Plate 34 For Typical Section From
Sta. 30+00 to Sta. 43+20

PLAN

0 50 100 200 300
SCALE



TYPICAL SECTION
Sta. 43+20 to 60+10
(Circulation Ditch to Sta. 56+50; End of Dredging)

JOB NO. 1313

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 6
SUNNYVALE OUTFALL EAST

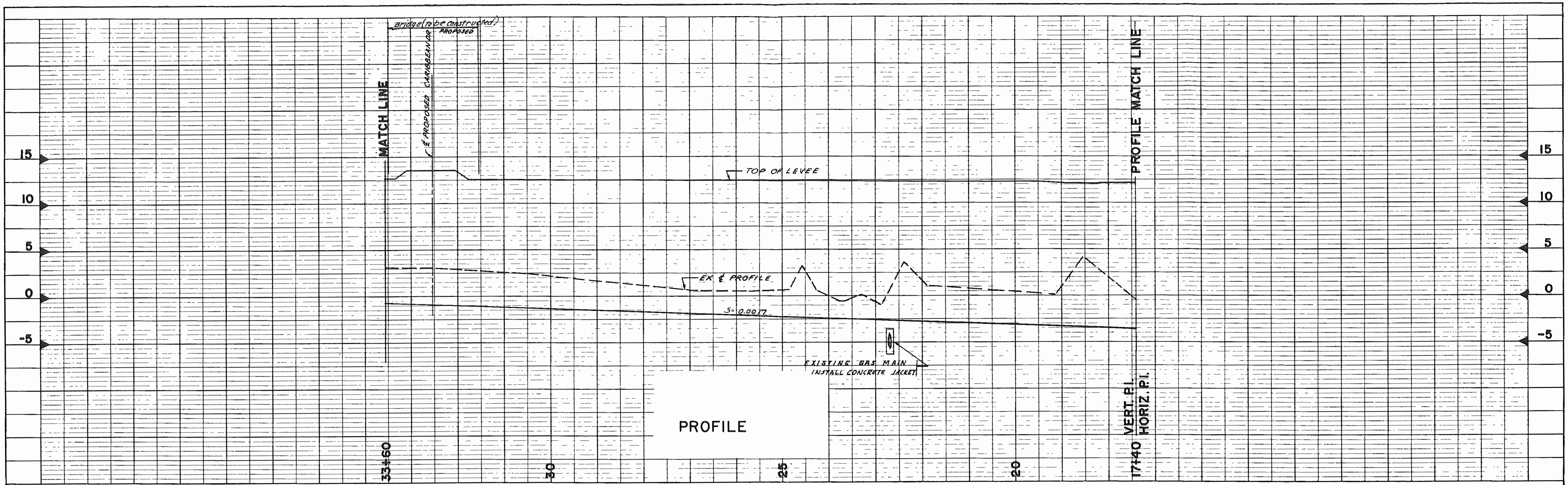
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

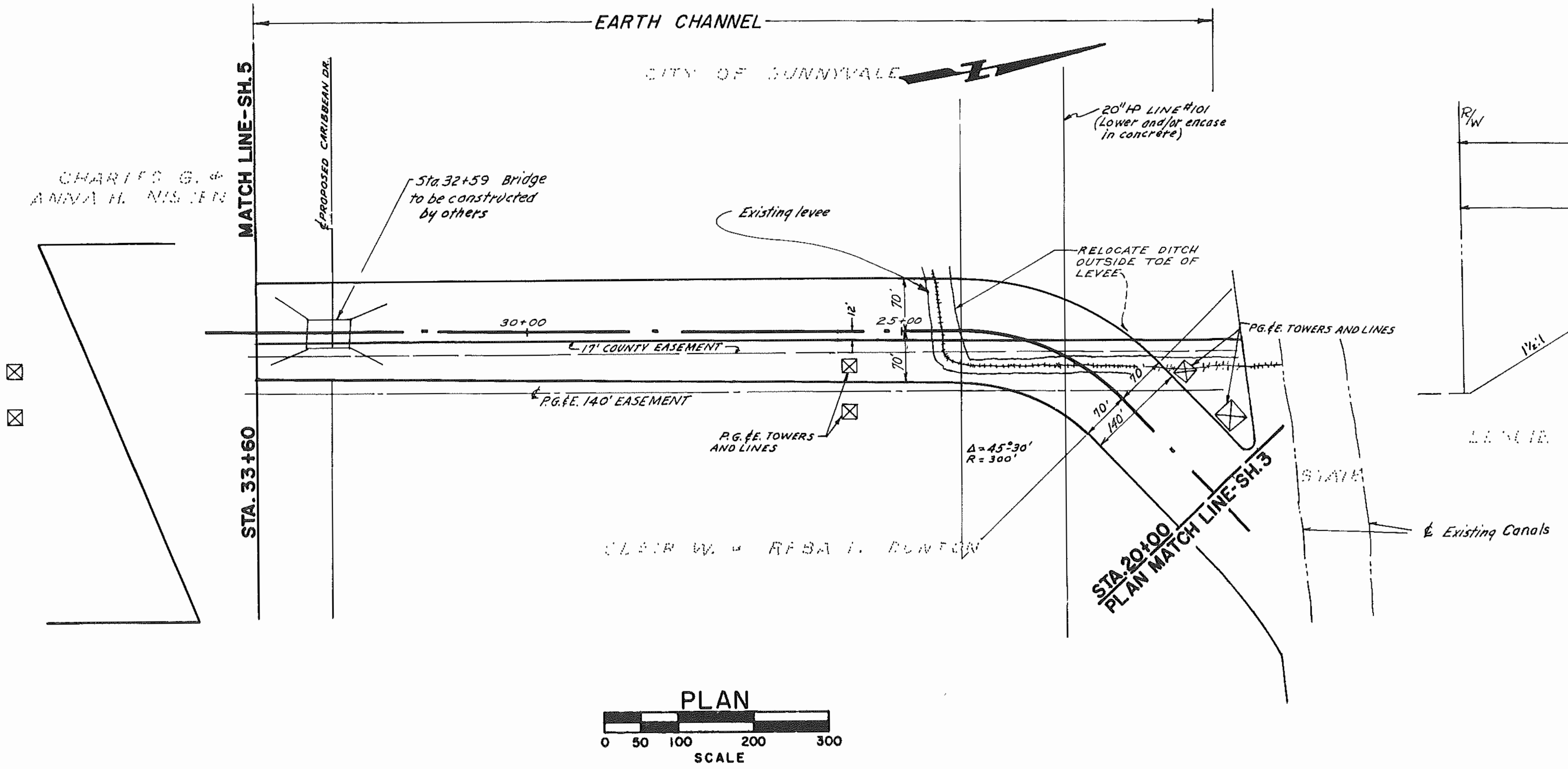
APPROVED FOR ENGINEERING
George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B Enochs
JAMES B ENOCHS, DIRECTOR

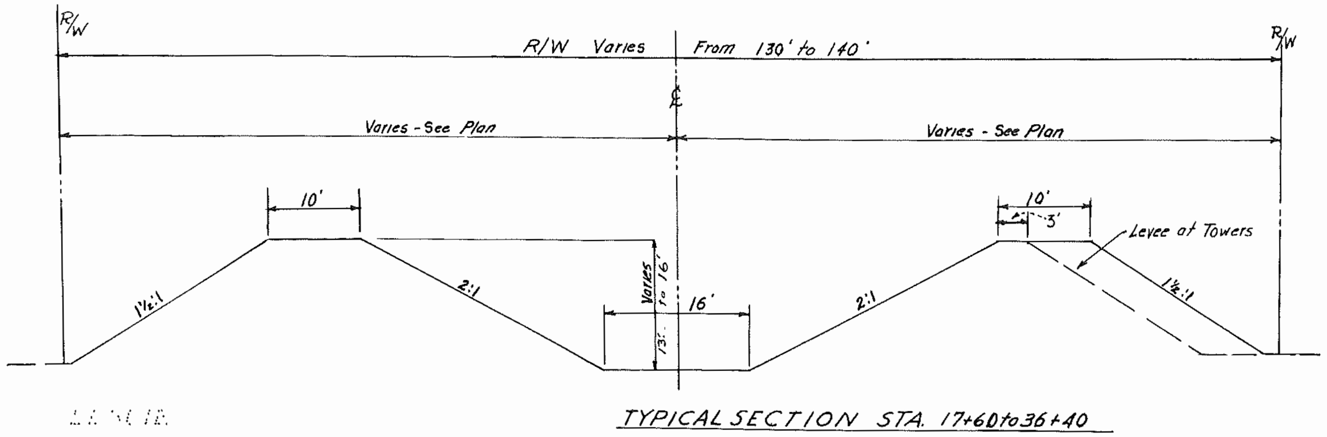
DESIGN CL-M.E.B.
DRAWN M.V.
CHECKED C.C.
DATE
Jan. 7, 1961

SCALE: AS SHOWN
T-15
T&L-10
T&L-47
L-49
SHEET
3
OF 16
FILE NO.

PLATE 35







TYPICAL SECTION STA. 17+60 to 36+40

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO.6
SUNNYVALE OUTFALL EAST

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

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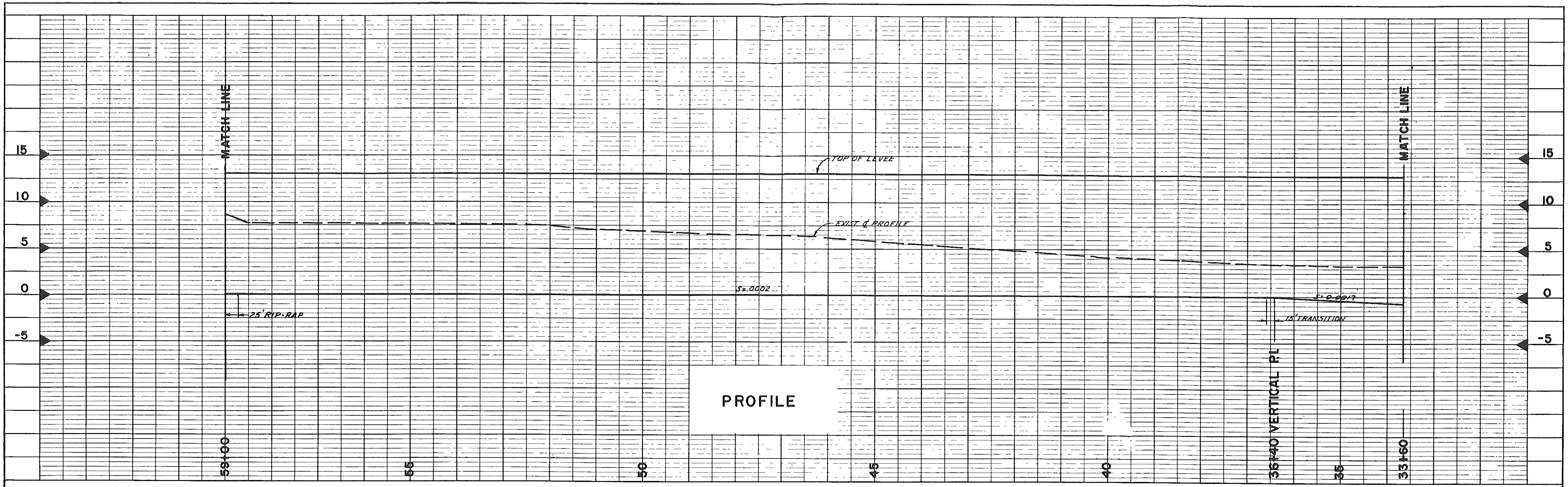
George H. Prime
GEORGE H. PRIME SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS DIRECTOR

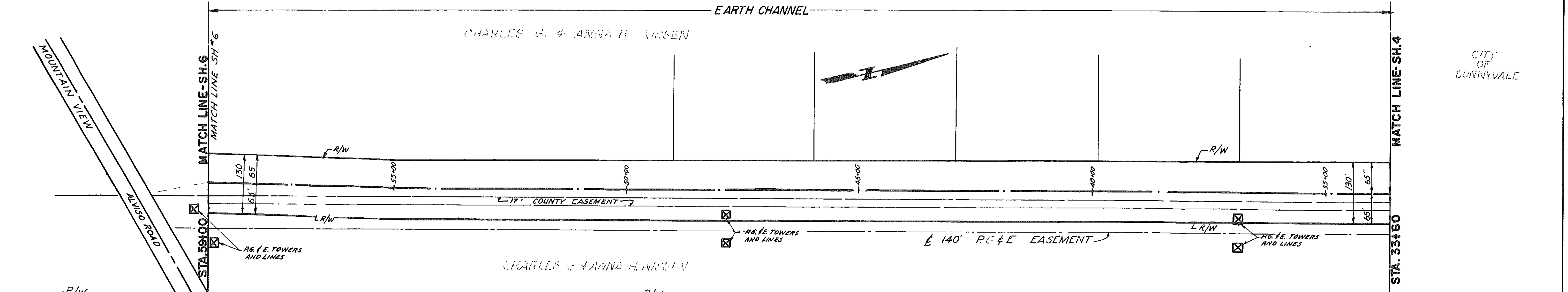
DESIGN AL.-AC.
DRAWN R.F.
CHECKED C.B.
DATE
JAN.7,1961

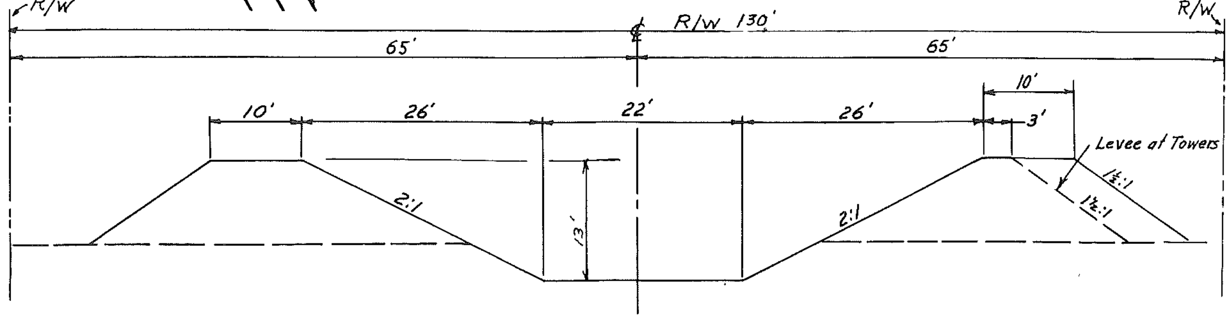
SCALE: AS SHOWN
T-15
T&L-19
T&L-47
L-49
JOB NO. 1313
SHEET 4 OF 16
FILE NO.

PLATE 36



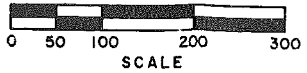
PROFILE

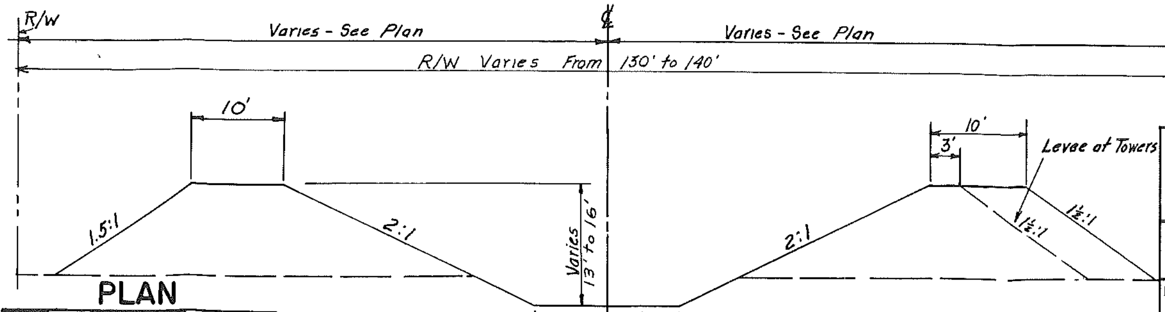




TYPICAL SECTION STA. 58+99.32 → 36+40

PLAN





TYPICAL SECTION STA. 17+60 to 36+40

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 6
SUNNYVALE OUTFALL EAST

SANTA CLARA COUNTY FLOOD CONTROL
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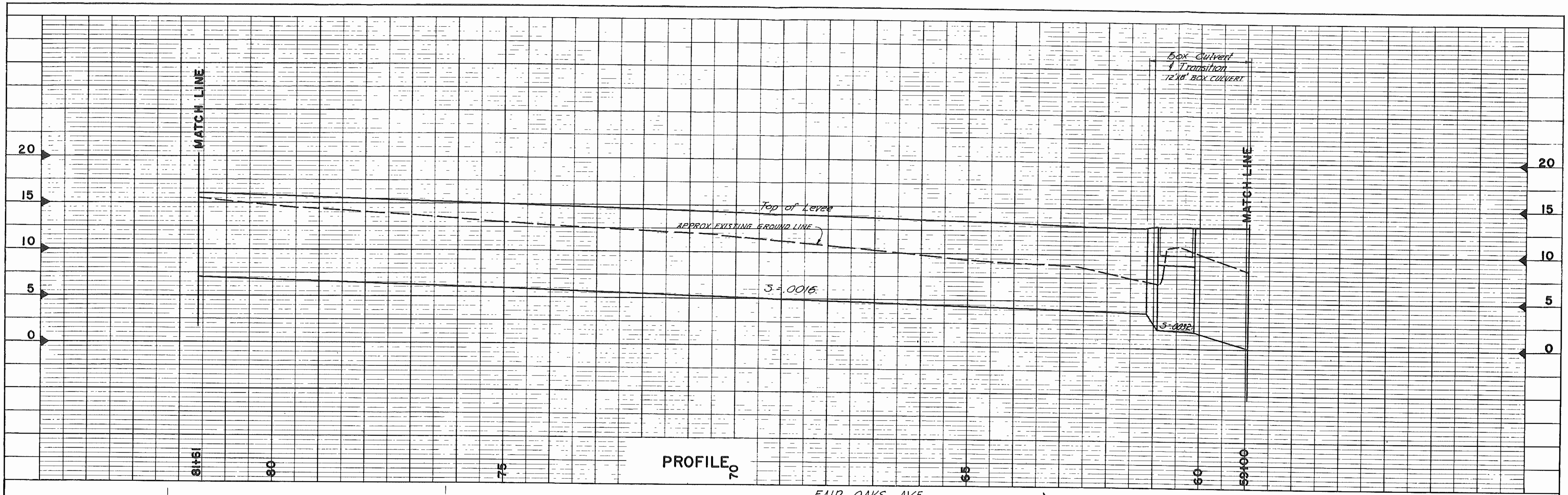
James B. Enochs
JAMES B. ENOCHS DIRECTOR

DESIGN A.C.-A.L.	SCALE: AS SHOWN	
DRAWN R.F.	T-15 T&L-19	JOB NO. 1313
CHECKED C.B	T&L-47 L-49	SHEET 5 OF 16
DATE JAN 7, 1961	FILE NO.	

PLATE 37



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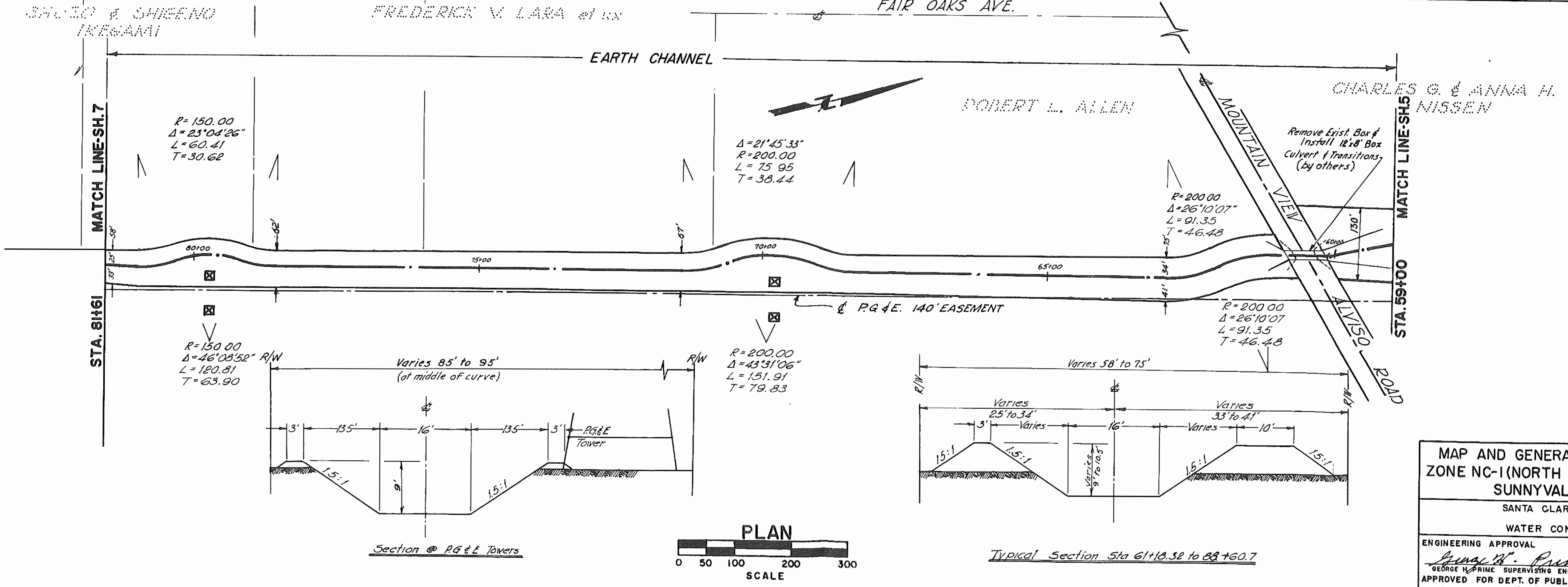

PLAN

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 6
SUNNYVALE OUTFALL EAST

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

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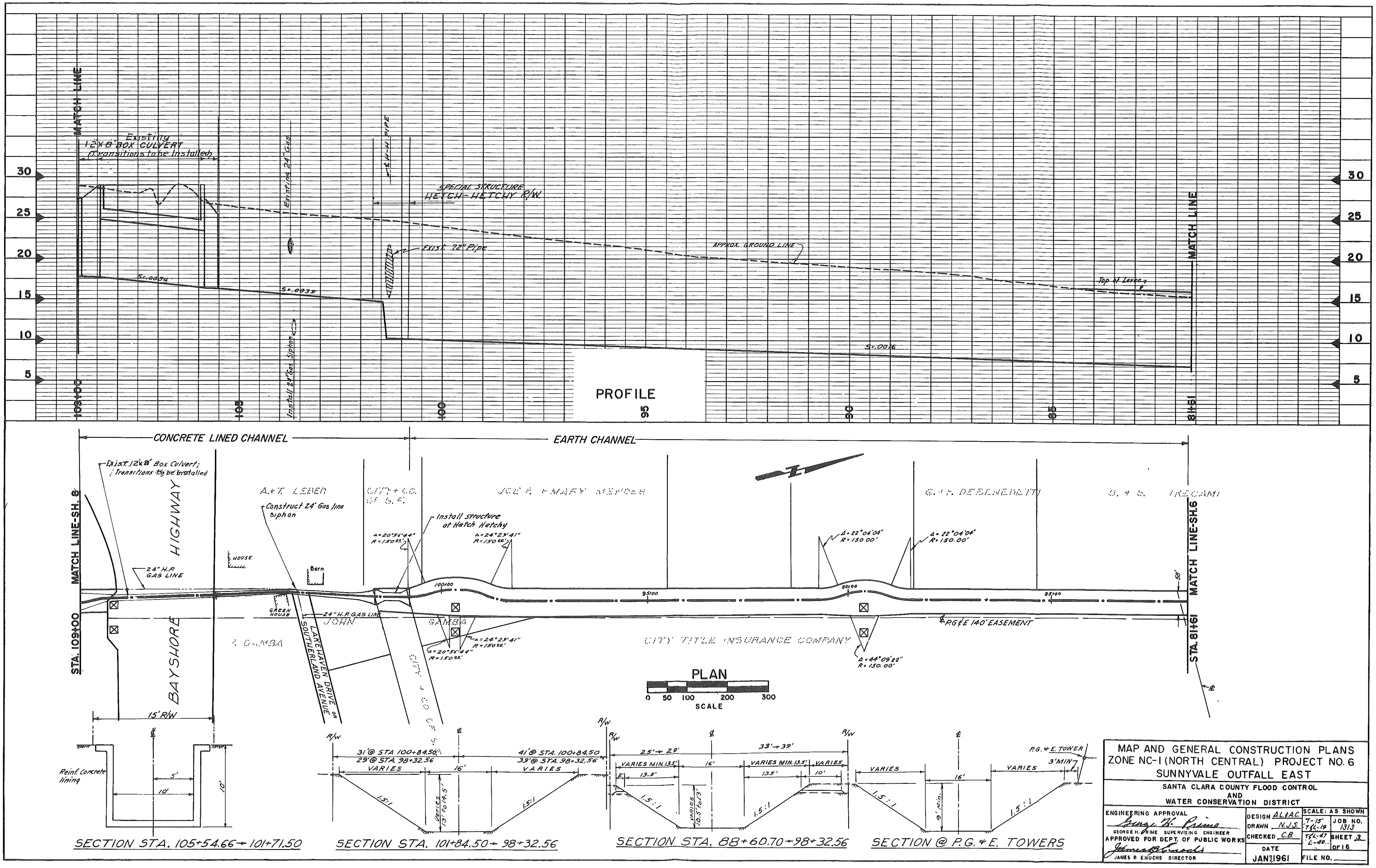
James B. Enochs
JAMES B. ENOCHS DIRECTOR

DESIGN A.L.&A.C.
DRAWN W.B.
CHECKED C.B.
DATE
JAN 3 1961

SCALE: AS SHOWN
T-15
T&L-19
T&L-47
L-49
JOB NO. 1313
SHEET 6
OF 16
FILE NO.

PLATE 38



MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 6
SUNNYVALE OUTFALL EAST

SANTA CLARA COUNTY FLOOD CONTROL
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WATER CONSERVATION DISTRICT

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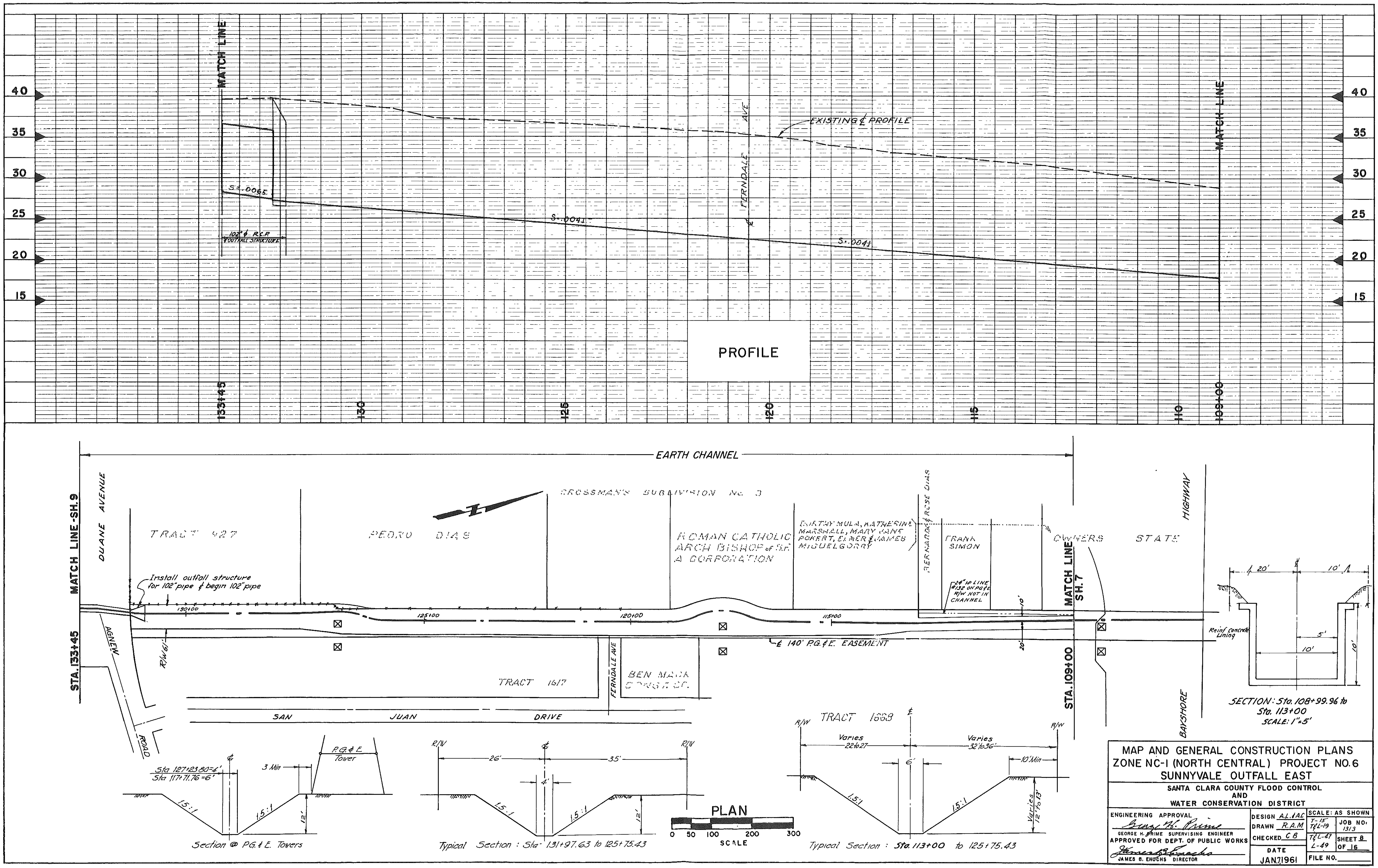
James B. Enochs
JAMES B ENOCHS DIRECTOR

DESIGN AL.&A.C.
DRAWN N.J.S.
CHECKED C.B.
DATE JAN 7, 1961

SCALE: AS SHOWN
T-15 T&L-19
T&L-47 L-49
JOB NO. 1313
SHEET 7 OF 16
FILE NO. ____

PLATE 39



MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 6
SUNNYVALE OUTFALL EAST

SANTA CLARA COUNTY FLOOD CONTROL
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WATER CONSERVATION DISTRICT

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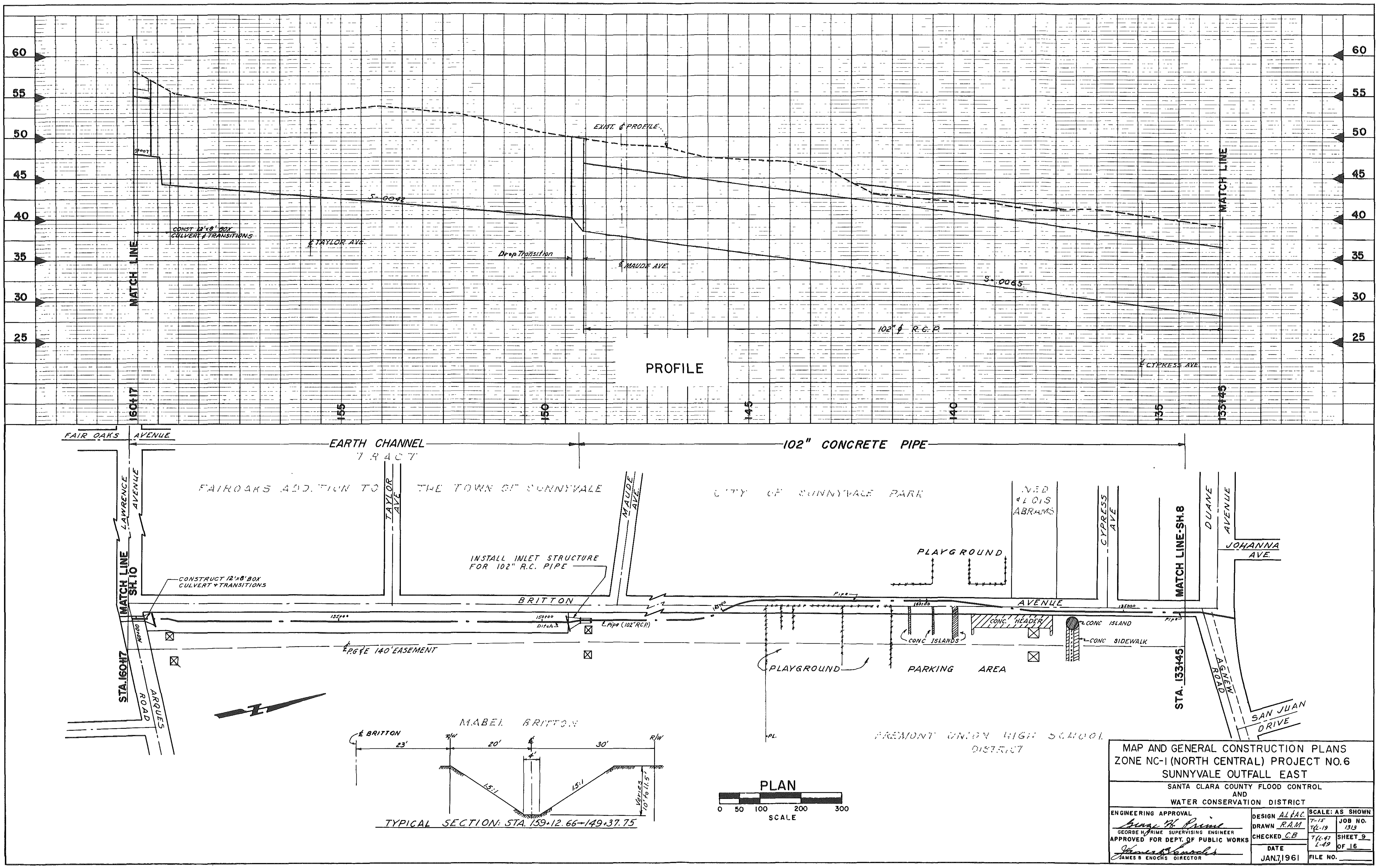
James B. Enochs
JAMES B. ENOCHS DIRECTOR

DESIGN A.L. & A.C.
DRAWN R.A.M.
CHECKED C B
DATE
JAN. 7 1961

SCALE: AS SHOWN
T-15
T&L-19
T&L-47
L-49
JOB NO. 1313
SHEET 8 OF 16
FILE NO.

PLATE 40



MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 6
SUNNYVALE OUTFALL EAST

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

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GEORGE H. PRIME SUPERVISING ENGINEER
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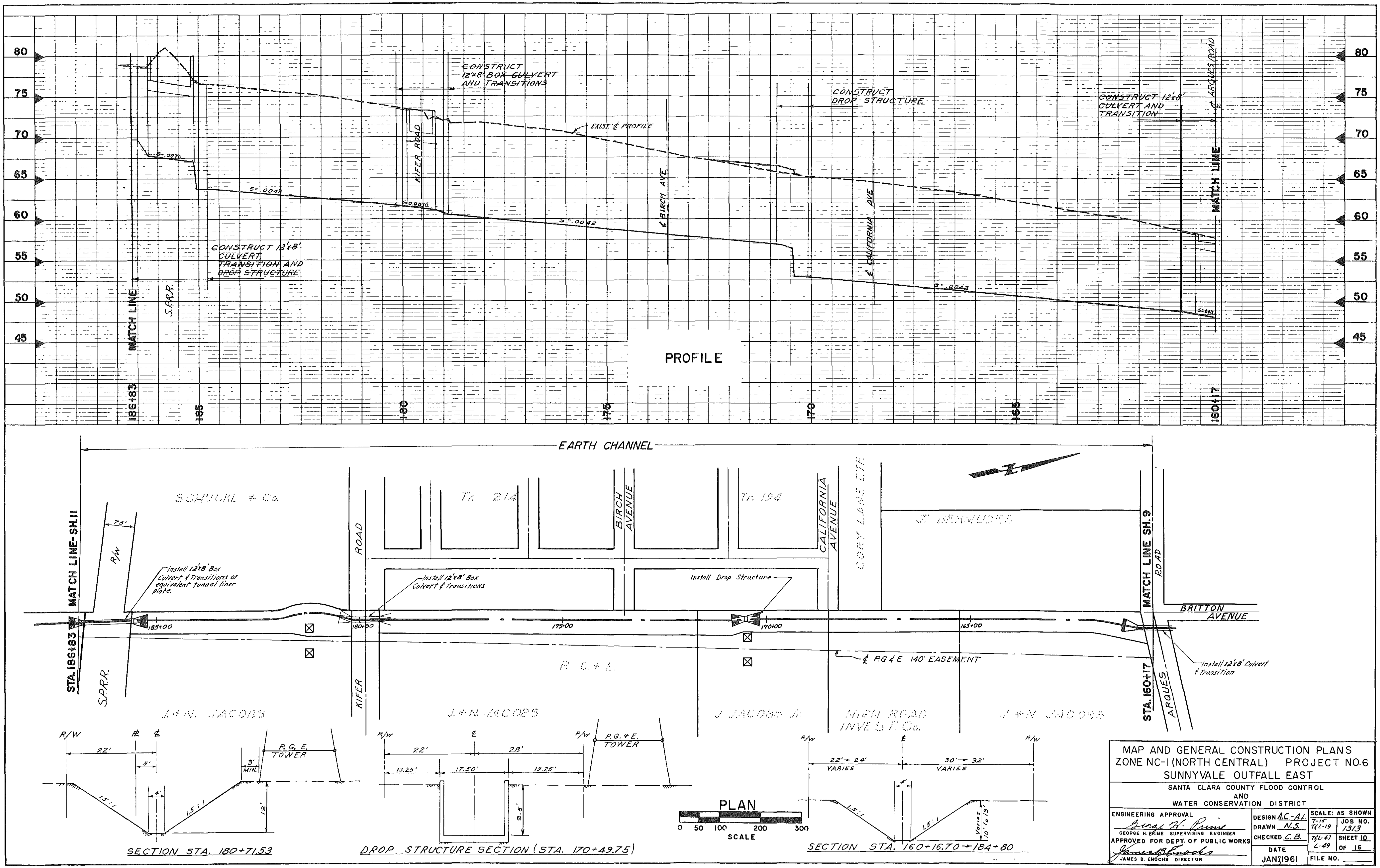
JAMES B ENOCHS DIRECTOR

DESIGN A.L. & A.C.
DRAWN R.A.M.
CHECKED C.B
DATE
JAN. 7, 1961

SCALE: AS SHOWN
T-15
T&L-19
T&L-47
L-49
JOB NO. 1313
SHEET 9 OF 16
FILE NO.

PLATE 41



SECTION STA. 180+71.53

DROP STRUCTURE SECTION (STA. 170+49.75)

SECTION STA. 160+16.70→184+80

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO.6
SUNNYVALE OUTFALL EAST

SANTA CLARA COUNTY FLOOD CONTROL
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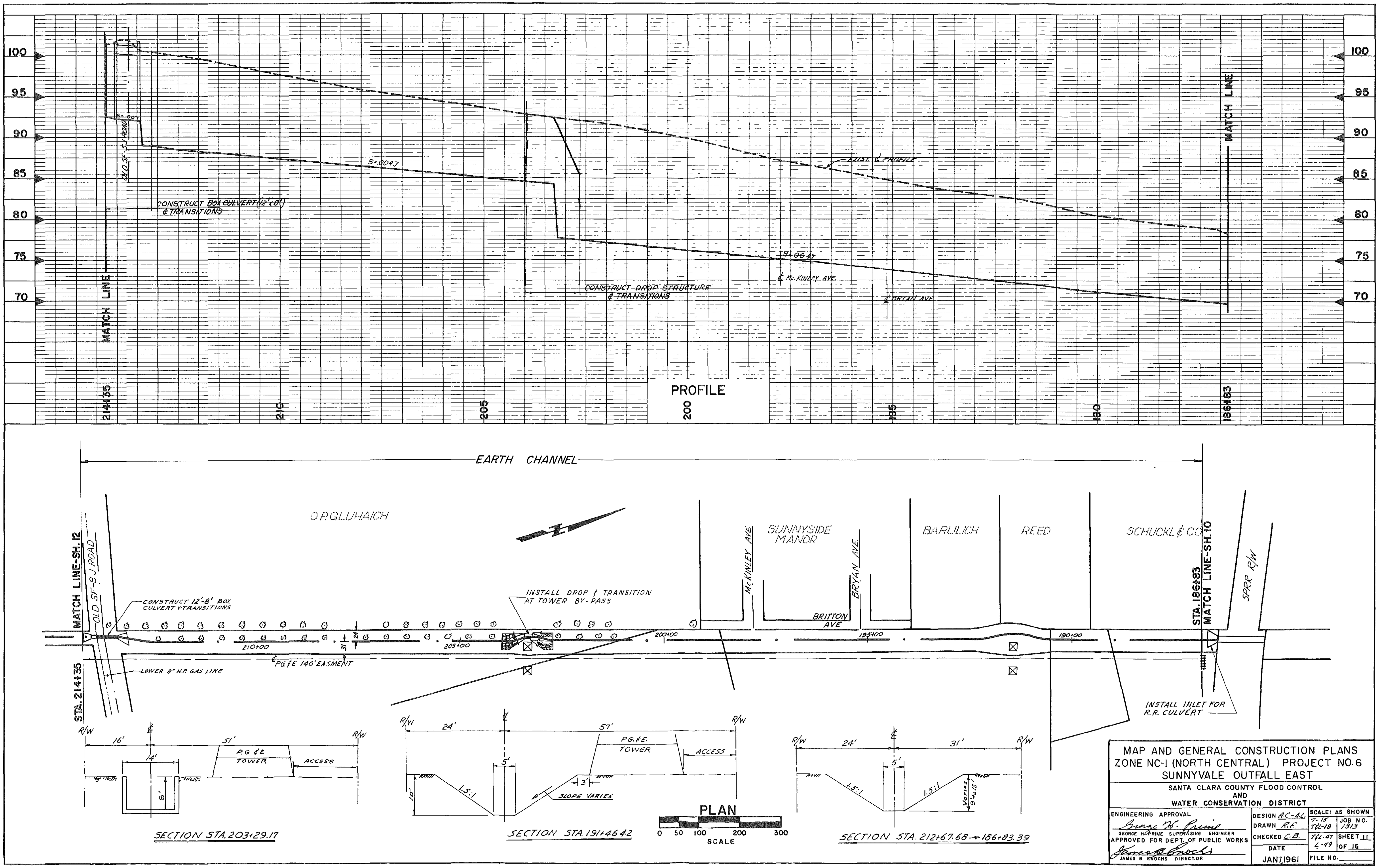
JAMES B. ENOCHS DIRECTOR

DESIGN A.C.-A.L.
DRAWN N.S.
CHECKED C.B.
DATE JAN 7 1961

SCALE: AS SHOWN
T-15
T&L-19
T&L-47
L-49
JOB NO. 1313
SHEET 10 OF 16
FILE NO.



MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 6
SUNNYVALE OUTFALL EAST

SANTA CLARA COUNTY FLOOD CONTROL
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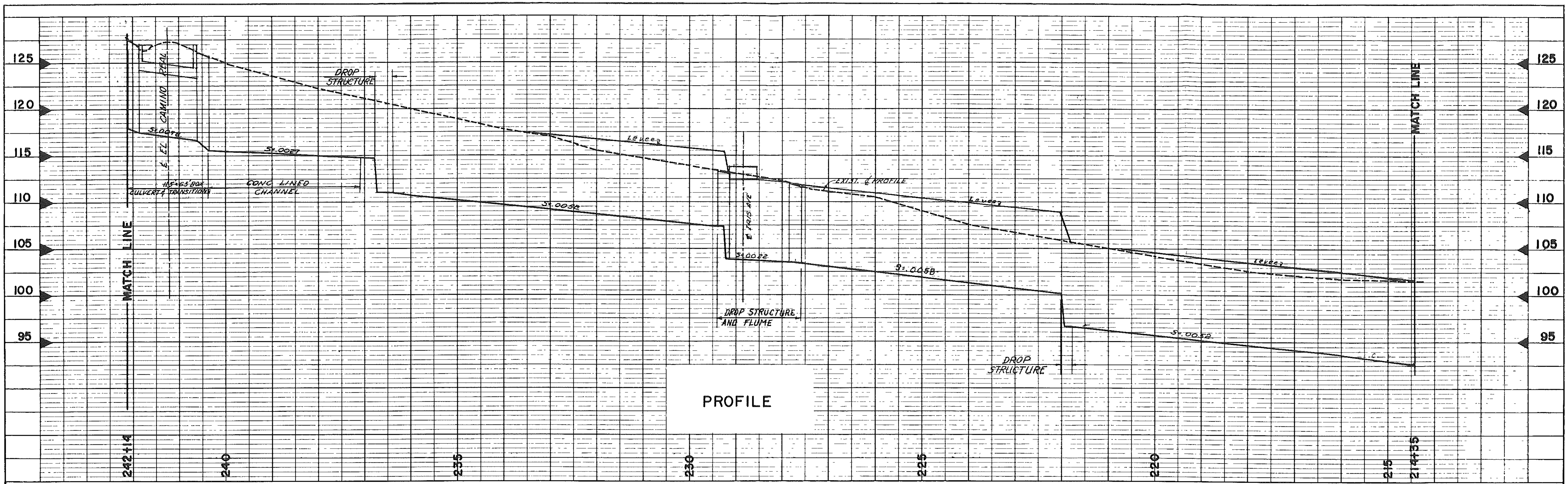
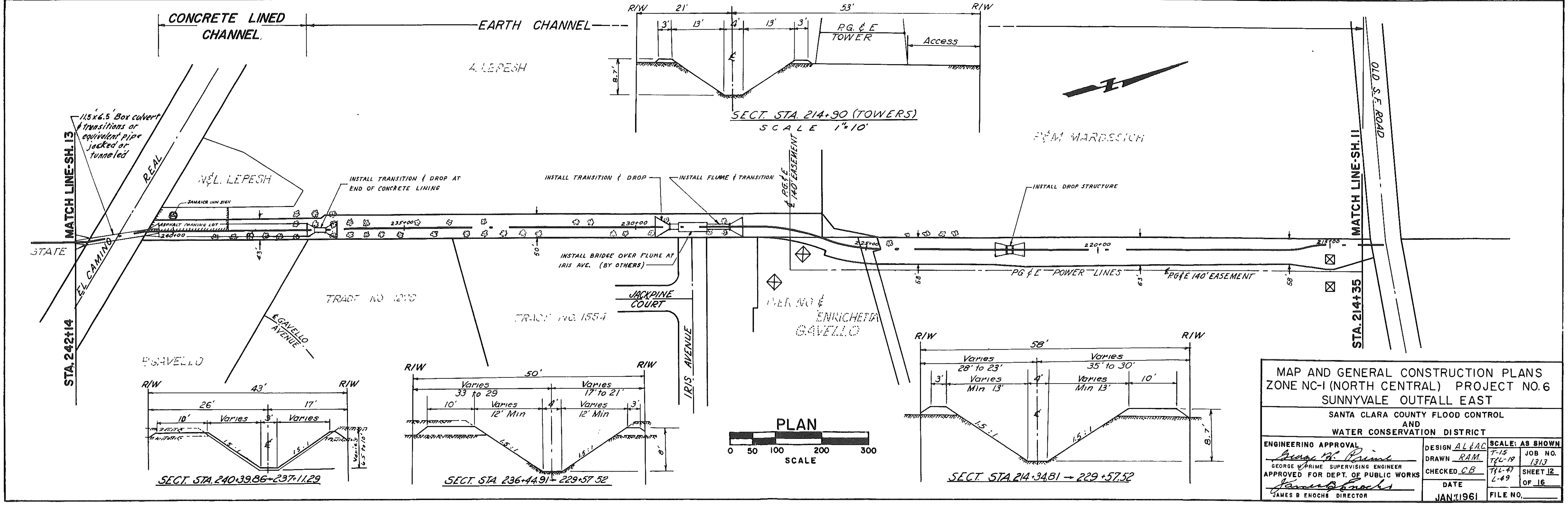
James B. Enochs
JAMES B ENOCHS DIRECTOR

DESIGN A.C.-A.L.
DRAWN R.F.
CHECKED C.B.
DATE
JAN 3, 1961

SCALE: AS SHOWN
T-15
T&L-19
JOB NO. 1313
T&L-47
L-49
SHEET 11
OF 16
FILE NO.

PLATE 43





MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 6
SUNNYVALE OUTFALL EAST

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
George W. Prime
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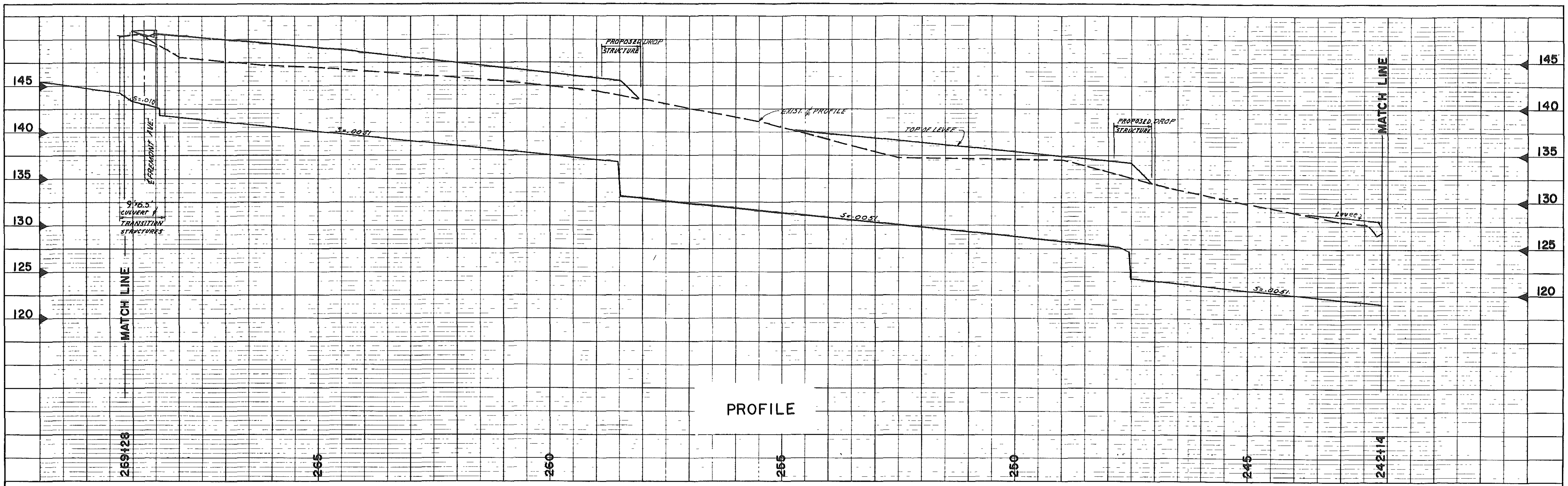
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B ENOCHS DIRECTOR

DESIGN A.L. & A.C.
DRAWN R.A.M.
CHECKED C.B.
DATE
JAN. 7, 1961

SCALE: AS SHOWN
T-15
T&L-19
T&L-47
L-49
JOB NO. 1313
SHEET 12
OF 16
FILE NO.

PLATE 44



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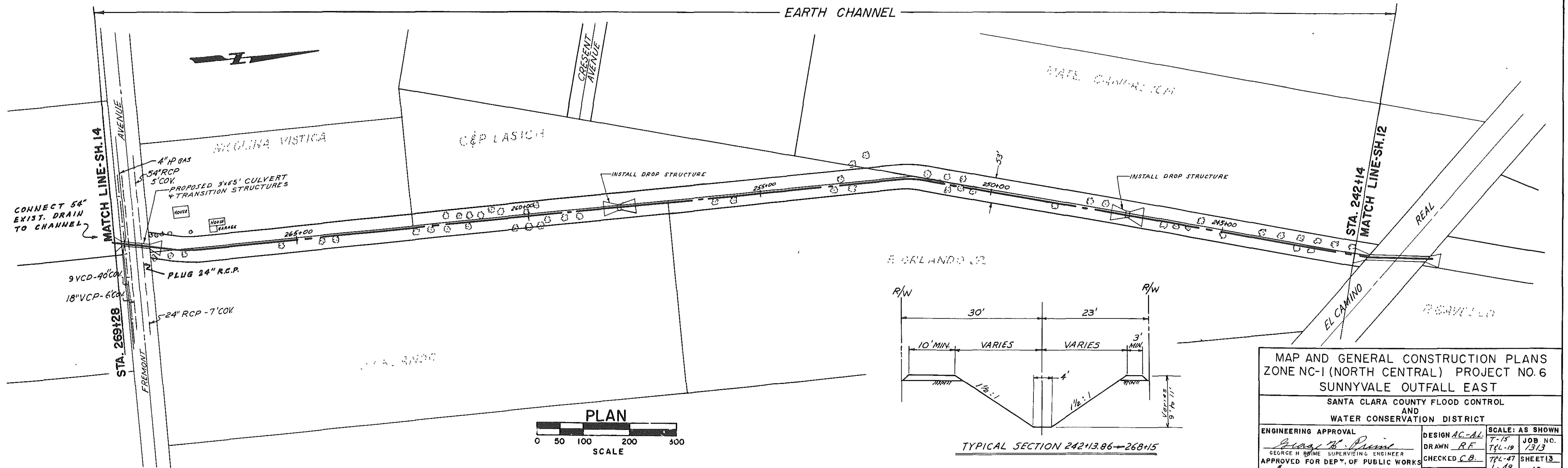


PLAN

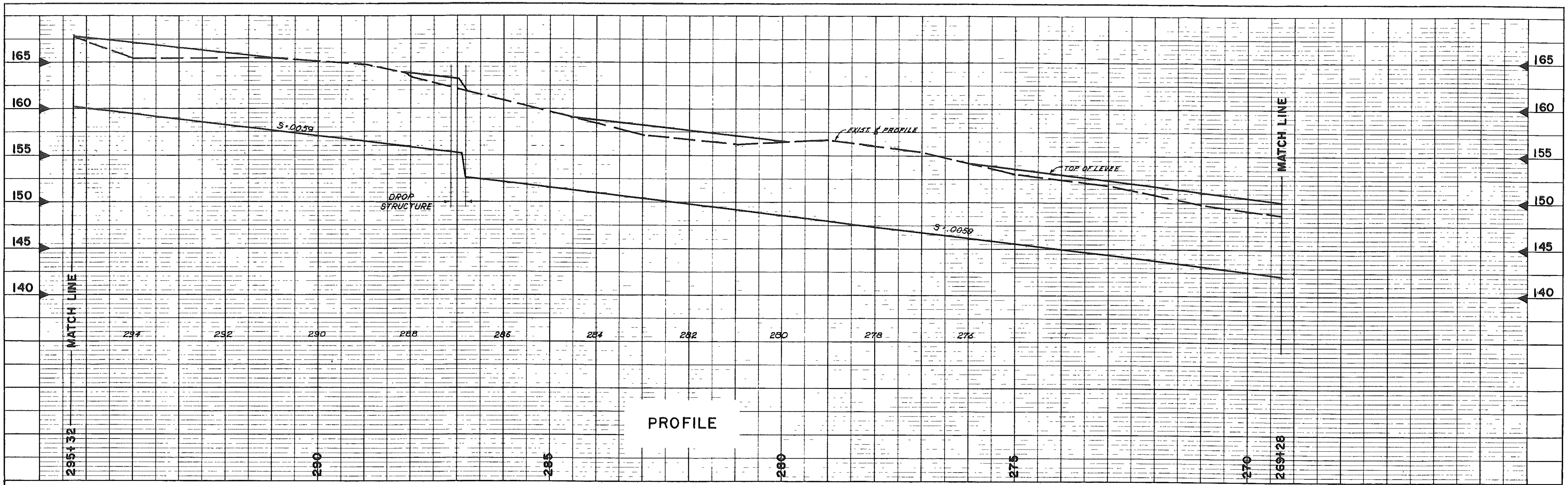
TYPICAL SECTION 242+13.86→268+15

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 6
SUNNYVALE OUTFALL EAST

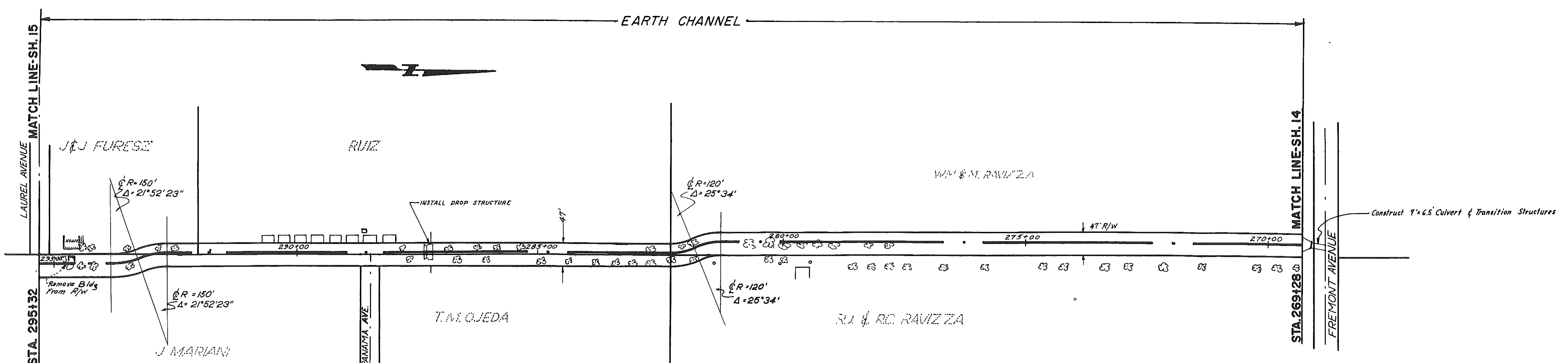
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL George H. Prime GEORGE H PRIME SUPERVISING ENGINEER APPROVED FOR DEPT. OF PUBLIC WORKS James B. Enochs JAMES B. ENOCHS DIRECTOR	DESIGN AC.-A.L. DRAWN RF CHECKED C.B.	SCALE: AS SHOWN	
		T-15 T&L-19	JOB NO. 1313
		T&L-47 L-49	SHEET 13 OF 16
	DATE JAN.7 1961	FILE NO.	

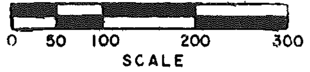
PLATE 45

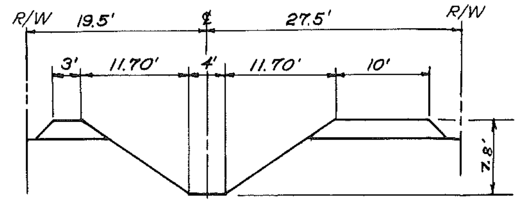


PROFILE



PLAN





TYPICAL SECTION
STA. 287+14 TO STA. 269+18

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 6
SUNNYVALE OUTFALL EAST

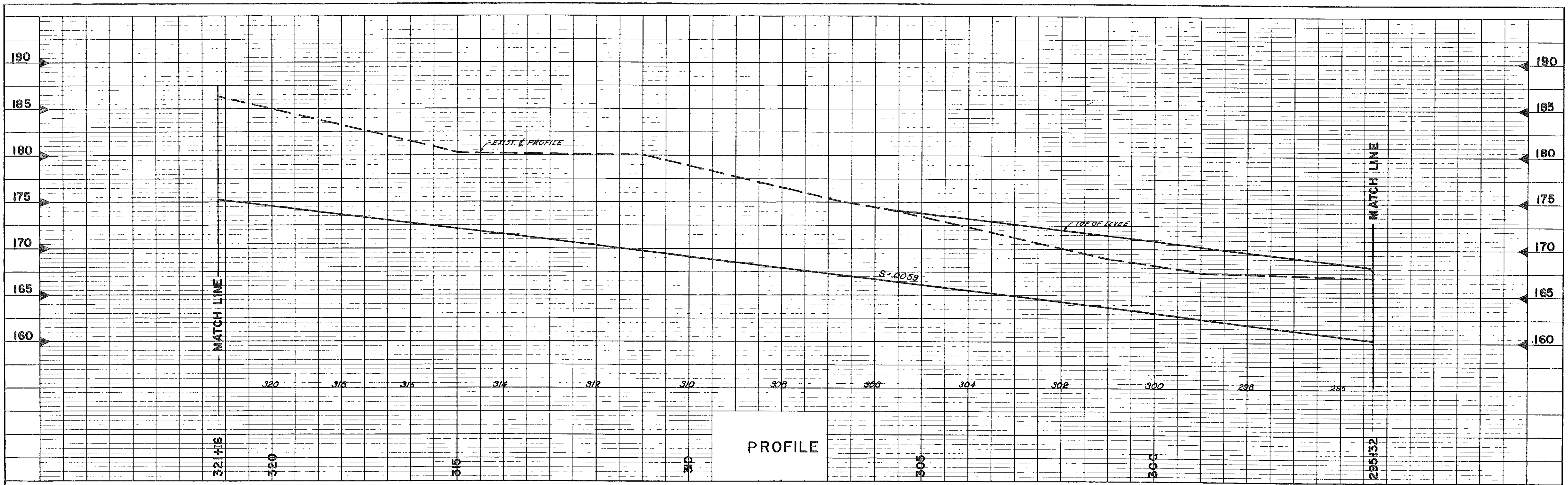
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
George H. Prime
GEORGE H. PRIME SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS DIRECTOR

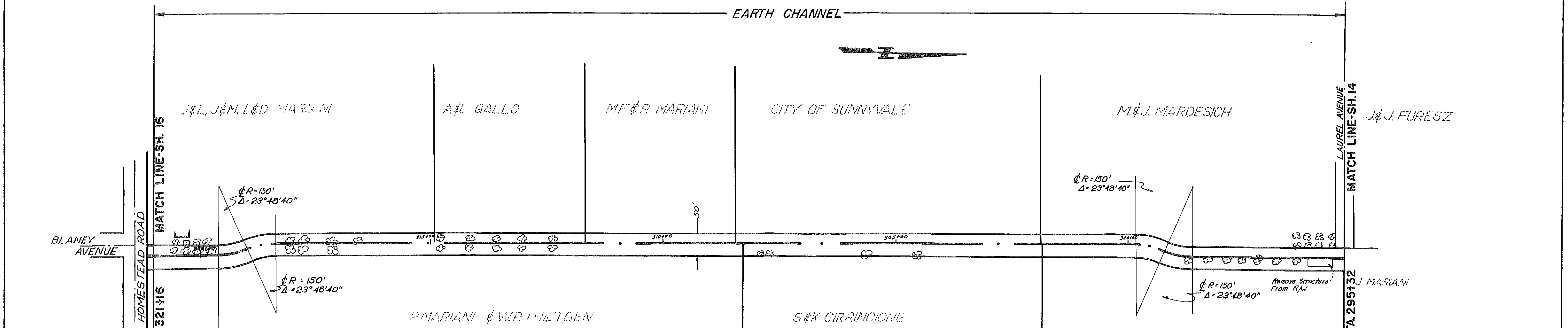
DESIGN AC & AL
DRAWN RF
CHECKED CB
DATE
JAN 7 1961

SCALE: AS SHOWN
T-15
T&L-19
JOB NO. 1313
T&L-47
L-49
SHEET 14 OF 16
FILE NO.

PLATE 46

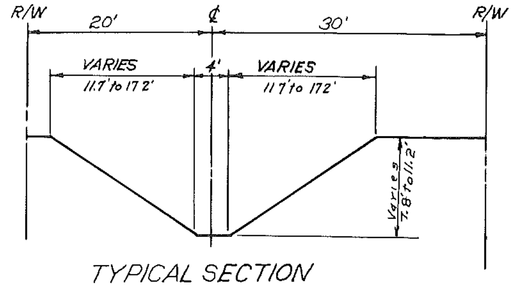


PROFILE

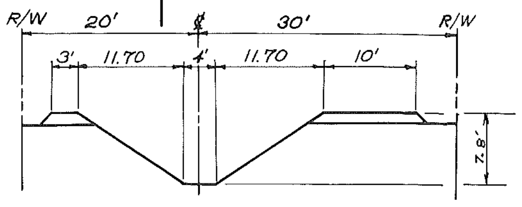


PLAN

0 50 100 200 300
SCALE



TYPICAL SECTION
STA 297+29 TO STA 321+16



TYPICAL SECTION
STA. 295+32 TO 287+31.33

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 6
SUNNYVALE OUTFALL EAST

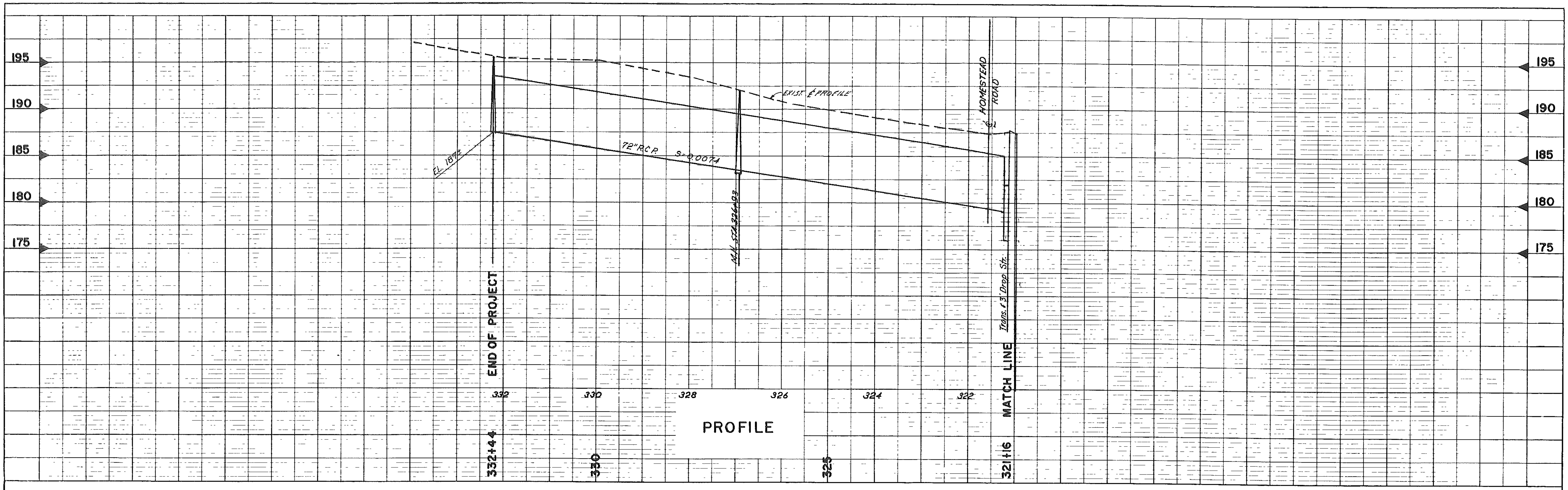
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
George H. Prime
GEORGE H. PRIME SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B ENOCHS DIRECTOR

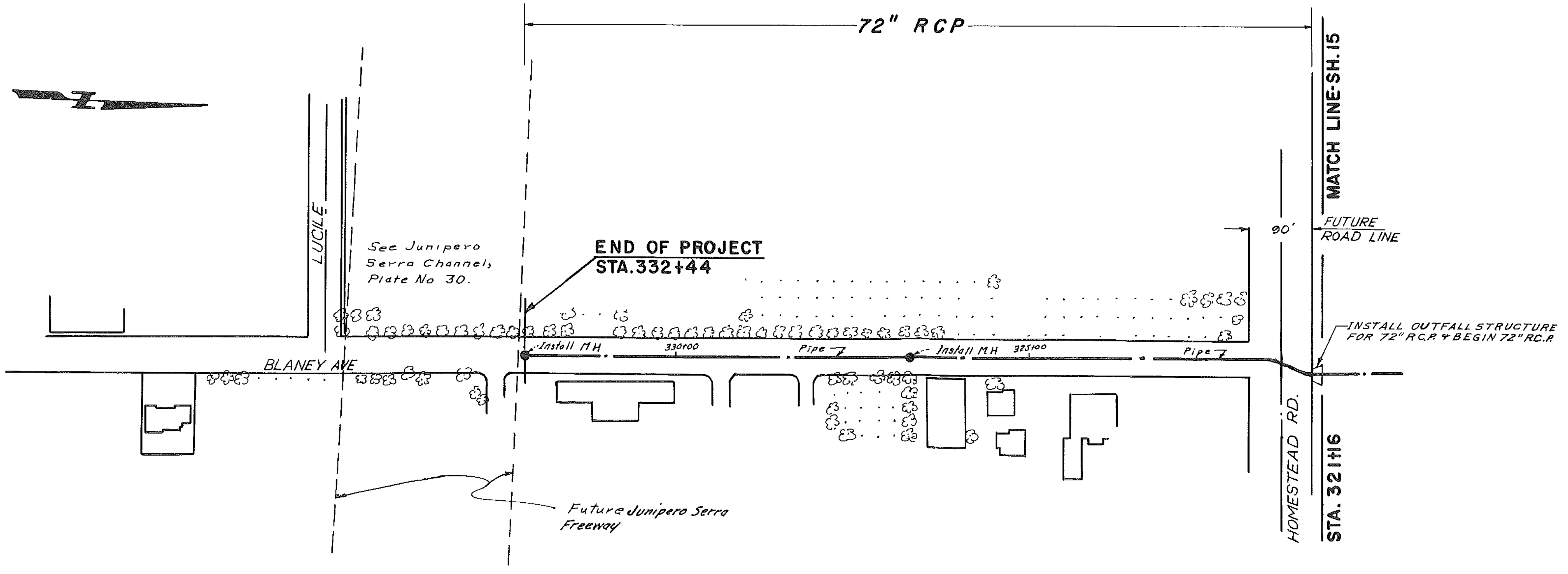
DESIGN AL, AC.
DRAWN D.E
CHECKED CB
DATE
JAN 7 1961

SCALE: AS SHOWN
T-15
T&L-19
JOB NO. 1313
T&L-47
L-49
SHEET 16
OF 16
FILE NO.

PLATE 47



PROFILE



PLAN

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-I (NORTH CENTRAL) PROJECT NO. 6
SUNNYVALE OUTFALL EAST

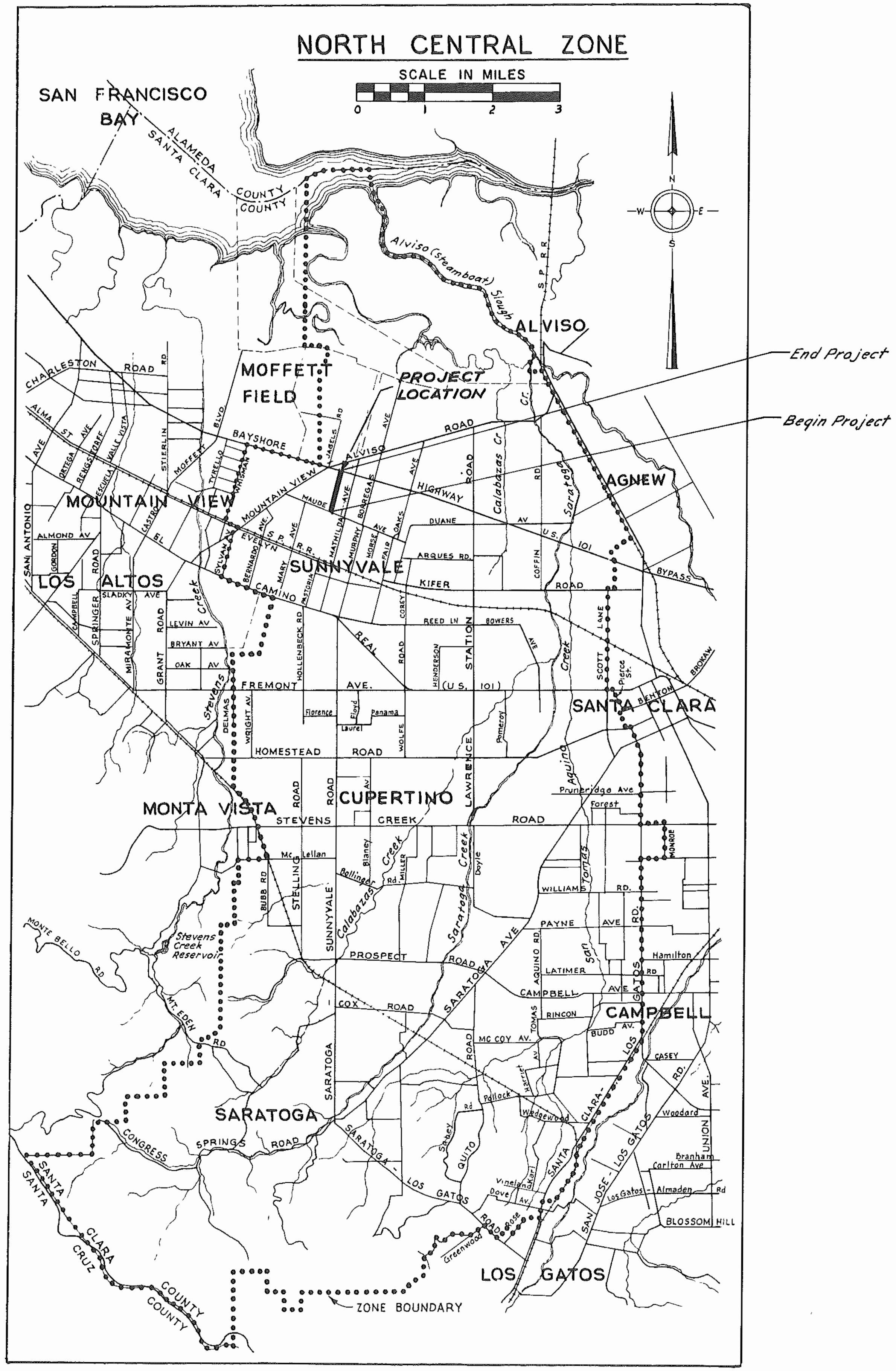
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
George H. Prime
GEORGE H. PRIME SUPERVISING ENGINEERING
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B ENOCHS DIRECTOR

DESIGN AL, A.C.
DRAWN DE.
CHECKED C.B
DATE
JAN 7 1961

SCALE: AS SHOWN
T-15
T&L-19
T&L-47
L-49
JOB NO. 1313
SHEET 16
OF 16
FILE NO.

PLATE 48



MAP AND GENERAL CONSTRUCTION PLANS

OF

ZONE N.C.-1 "NORTH CENTRAL", PROJECT NO. 7

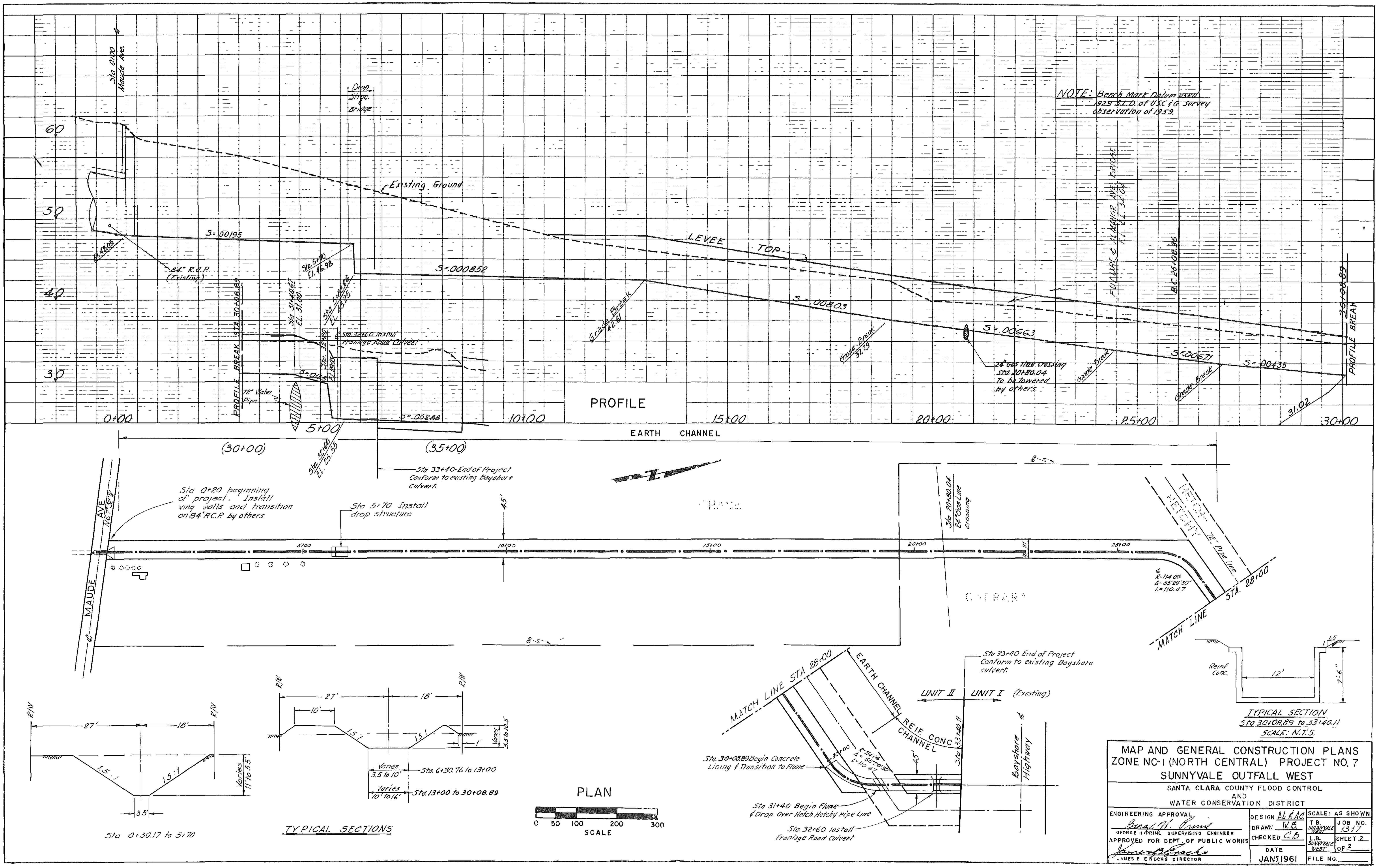
CONSTRUCTION OF SUNNYVALE OUTFALL (W.)

UNIT II

FROM MAUDE AVENUE TO BAYSHORE HIGHWAY

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA CLARA COUNTY, CALIFORNIA



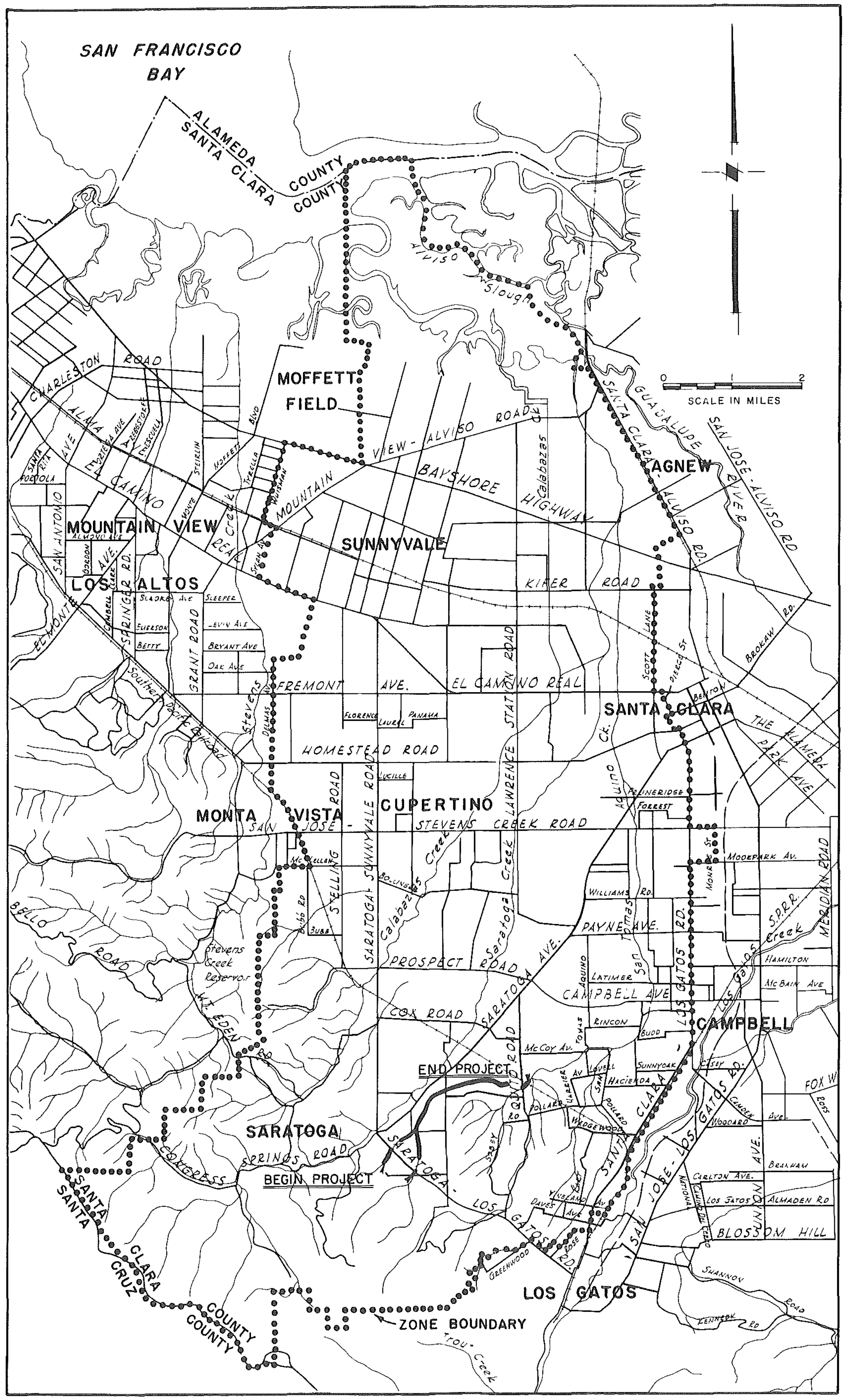
MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 7
SUNNYVALE OUTFALL WEST

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
George H. Prime
GEORGE H. PRIME SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B Enochs
JAMES B ENOCHS DIRECTOR

DESIGN AL & AC	SCALE: AS SHOWN		
DRAWN W.B.	T.B. SUNNYVALE WEST	JOB NO. 1317	
CHECKED C.B.	L.B. SUNNYVALE WEST	SHEET 2 OF 2	
DATE JAN 3, 1961	FILE NO.		

PLATE 50



MAP AND GENERAL CONSTRUCTION PLANS

OF

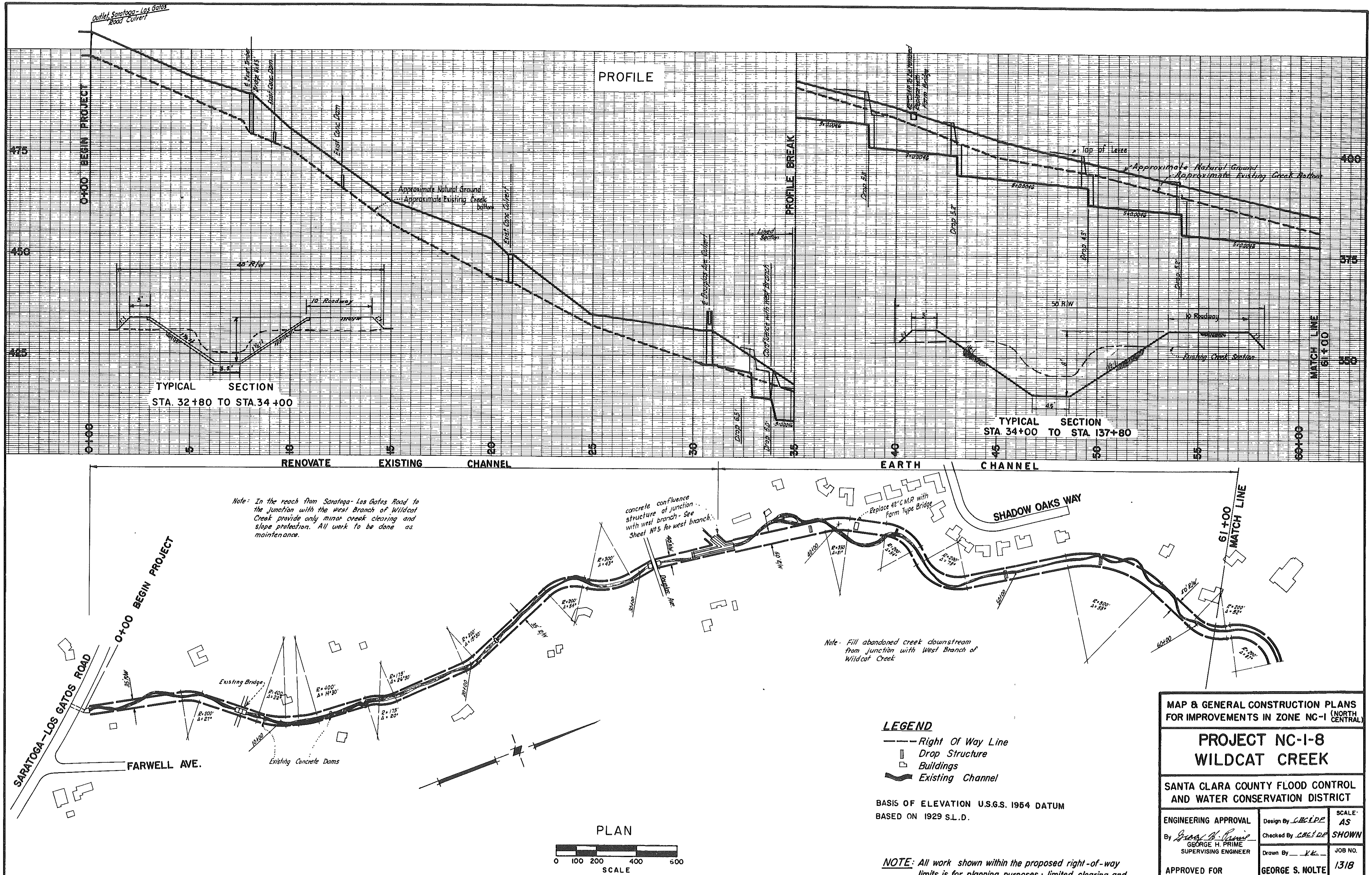
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 8

WILDCAT CREEK IMPROVEMENT

MAIN BRANCH SARATOGA-LOS GATOS RD. TO SAN TOMAS AQUINO CREEK
WEST BRANCH 1800 FEET SOUTH OF SARATOGA-LOS GATOS RD. TO WILDCAT CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA CLARA COUNTY, CALIFORNIA



PROFILE

TYPICAL SECTION
STA. 32+80 TO STA. 34+00

TYPICAL SECTION
STA. 34+00 TO STA. 137+80

PLAN

Note: In the reach from Saratoga- Los Gatos Road to the junction with the west Branch of Wildcat Creek provide only minor creek clearing and slope protection. All work to be done as maintenance.

Note. Fill abandoned creek downstream from junction with West Branch of Wildcat Creek

LEGEND

- - - - Right Of Way Line
▯ Drop Structure
▭ Buildings
〰 Existing Channel

BASIS OF ELEVATION U.S.G.S. 1964 DATUM
BASED ON 1929 S.L.D.

NOTE: All work shown within the proposed right-of-way limits is for planning purposes; limited clearing and bank protection in critical areas of existing channel will be done on a maintenance basis.

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-I (NORTH CENTRAL)

PROJECT NC-I-8
WILDCAT CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
By George H. Prime
GEORGE H. PRIME
SUPERVISING ENGINEER

APPROVED FOR
DEPT. OF PUBLIC WORKS
By James B. Enochs
JAMES B. ENOCHS
DIRECTOR

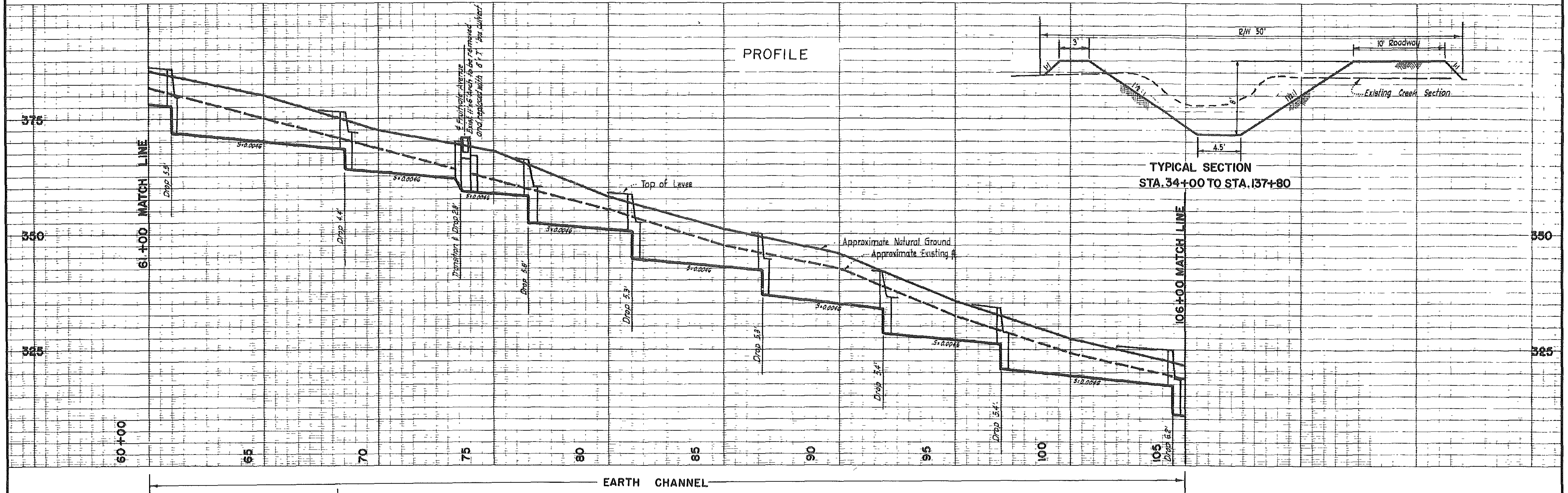
Design By CBC & DP
Checked By CBC & DP
Drawn By V.K.

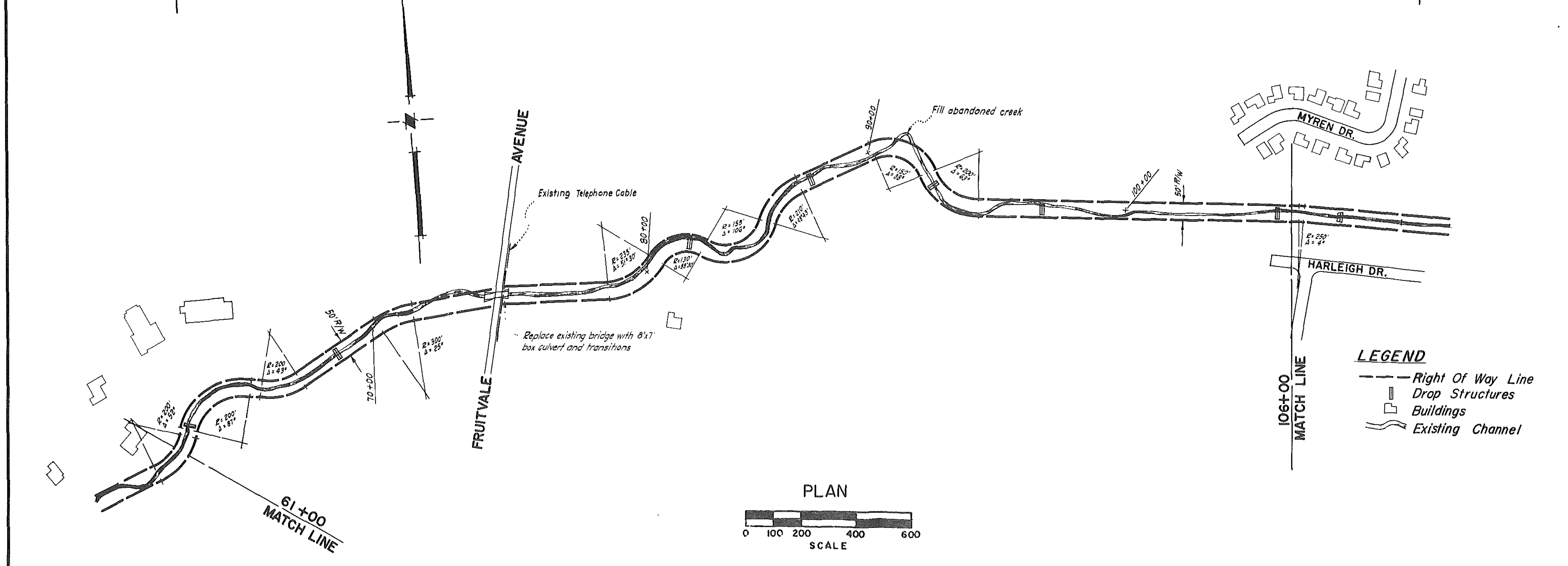
GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF

Date JAN. 7, 1961

SCALE AS SHOWN
JOB NO. 1318
SHEET 2 OF 5

PLATE 52





PLAN

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-8
WILDCAT CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
By George H. Prime
GEORGE H PRIME
SUPERVISING ENGINEER

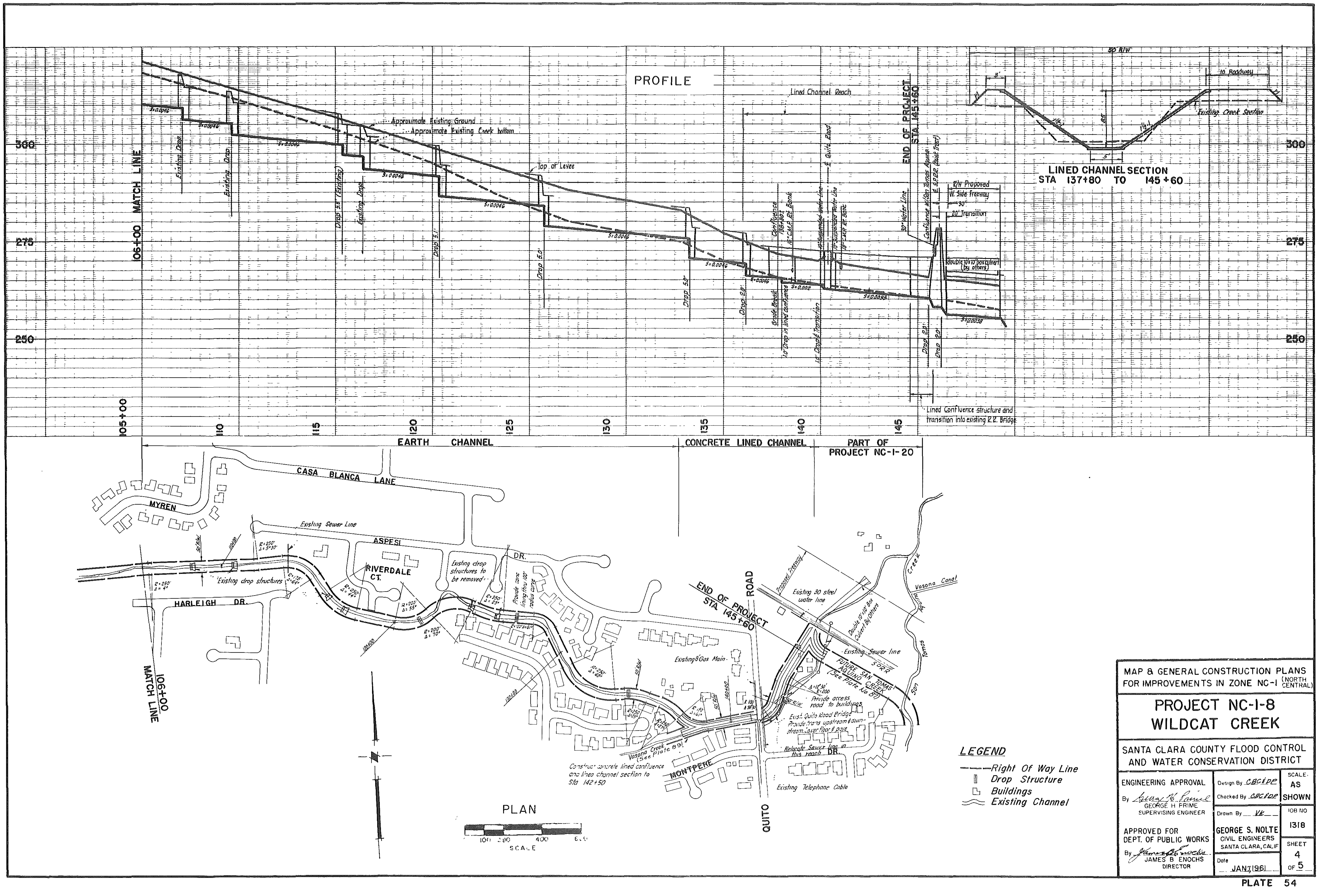
APPROVED FOR
DEPT. OF PUBLIC WORKS
By James B Enochs
JAMES B ENOCHS
DIRECTOR

Design By CBC & DP
Checked By CBC & DP
Drawn By V.K.

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF

Date JAN 1961

SCALE AS SHOWN
JOB NO 1318
SHEET 3 OF 5



MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-I (NORTH CENTRAL)

PROJECT NC-I-8
WILDCAT CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
By George H. Prime
GEORGE H PRIME
SUPERVISING ENGINEER

APPROVED FOR
DEPT. OF PUBLIC WORKS
By James B. Enochs
JAMES B ENOCHS
DIRECTOR

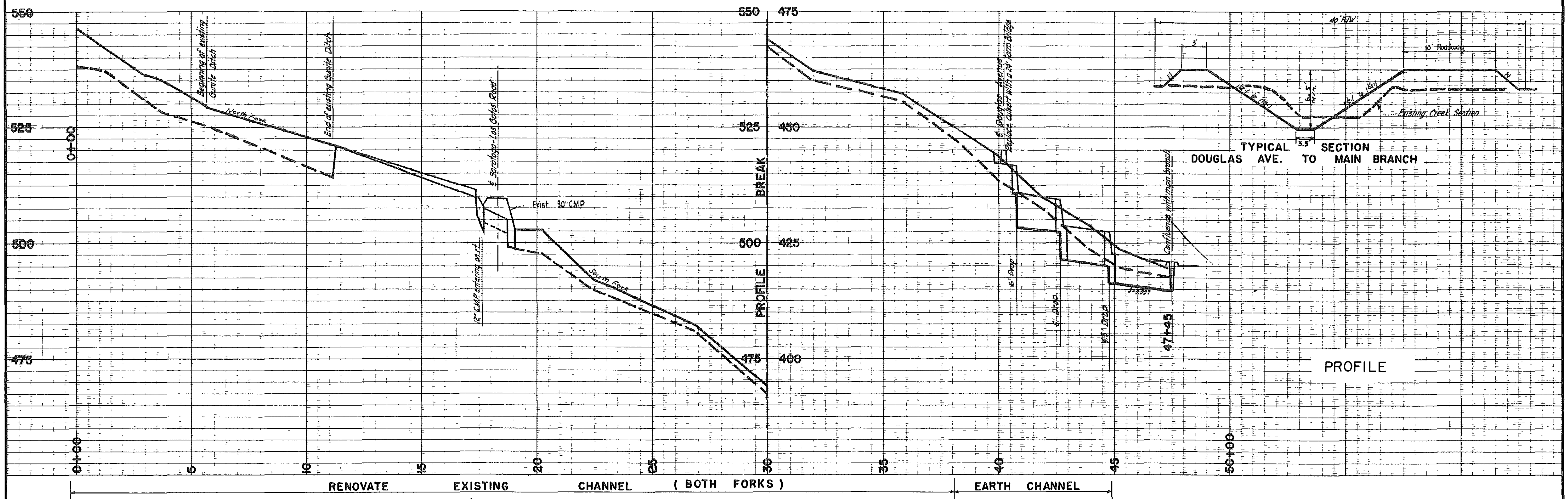
Design By CBC&DP
Checked By CBC&DP
Drawn By VK

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF

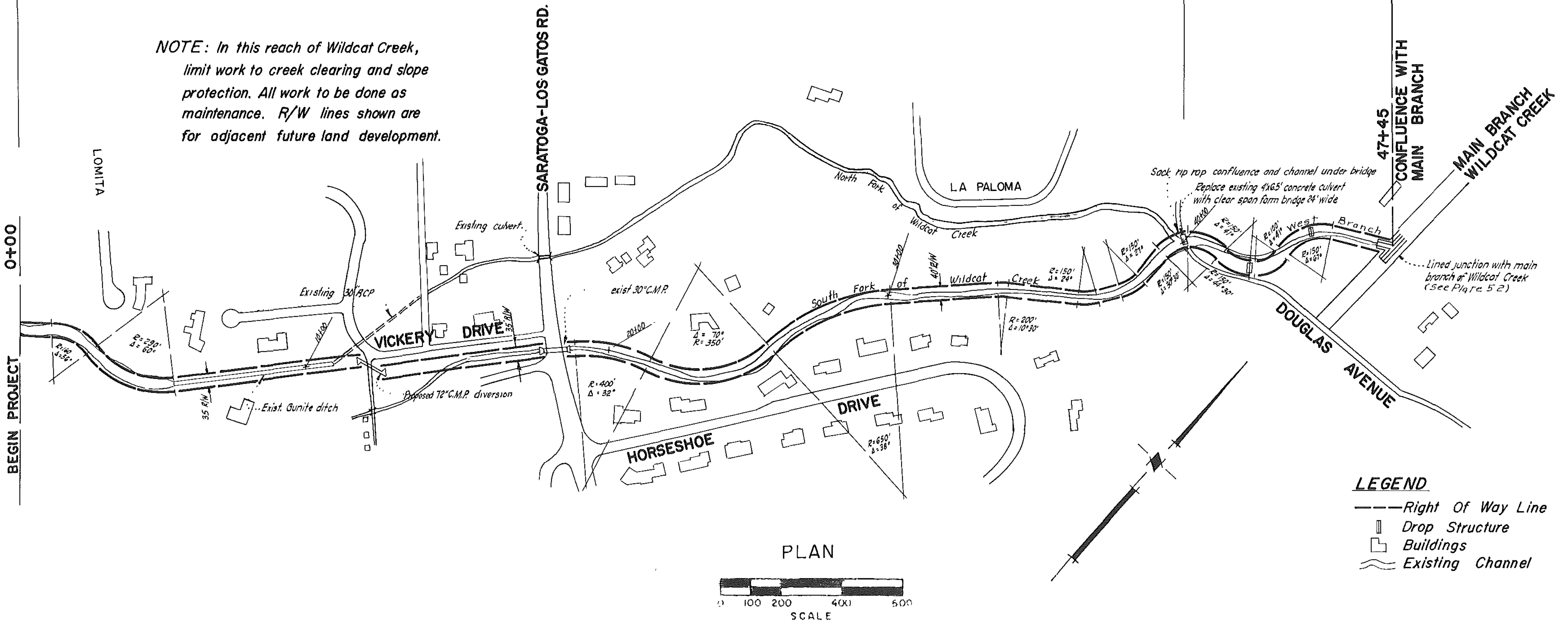
Date JAN 7 1961

SCALE AS SHOWN
JOB NO 1318
SHEET 4 OF 5

PLATE 54



NOTE: In this reach of Wildcat Creek, limit work to creek clearing and slope protection. All work to be done as maintenance. R/W lines shown are for adjacent future land development.



LEGEND

- - - -Right Of Way Line
▯ Drop Structure
⌐ Buildings
≈ Existing Channel

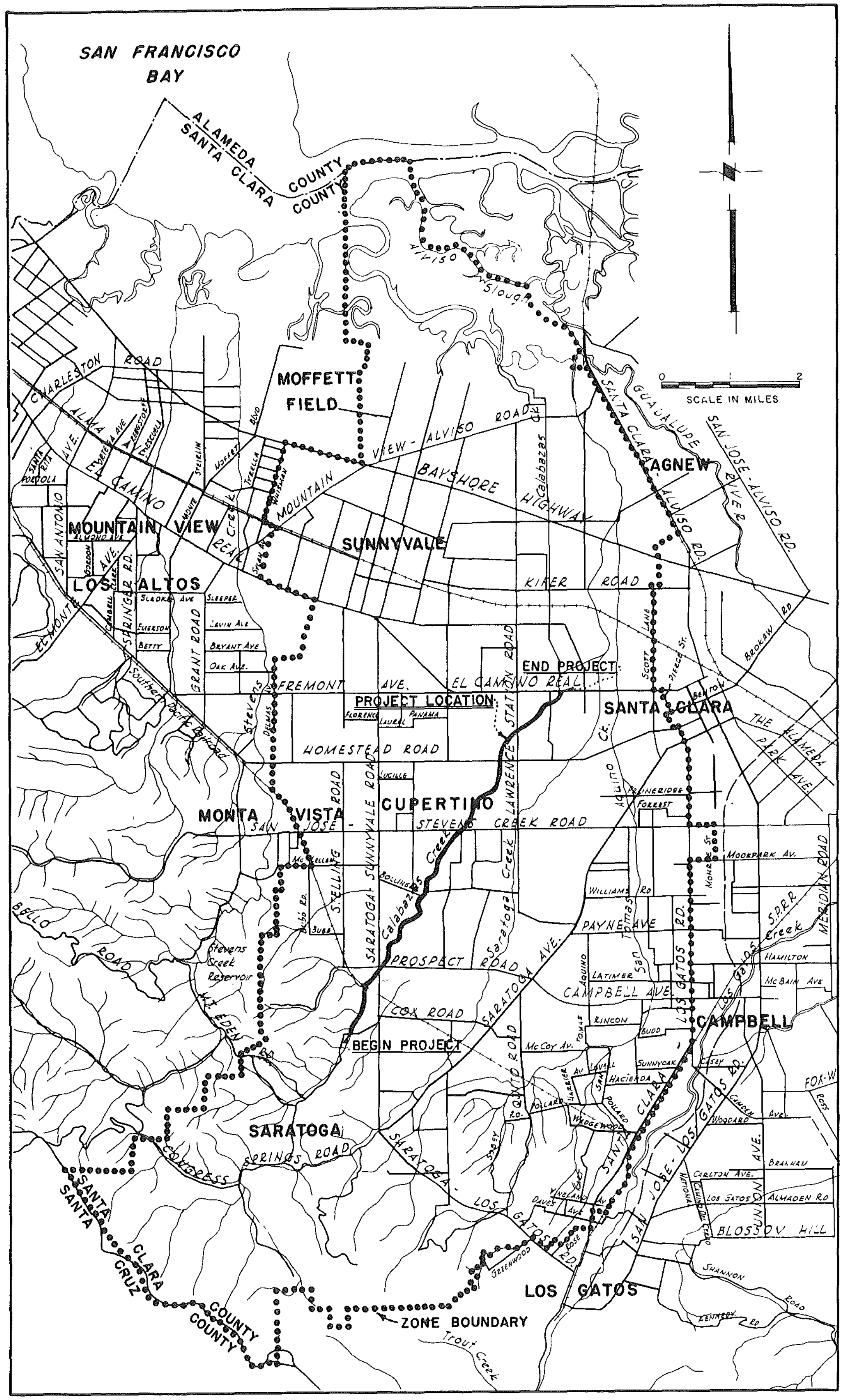
MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-8
WILDCAT CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL By George H. Prime GEORGE H PRIME SUPERVISING ENGINEER	Design By CBC EDP Checked By CBC EDP	SCALE AS SHOWN
	Drawn By VK	JOB NO 1318
APPROVED FOR DEPT. OF PUBLIC WORKS By James B Enochs JAMES B ENOCHS DIRECTOR	GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF Date JAN 7 1961	SHEET 5 OF 5

PLATE 55



MAP AND GENERAL CONSTRUCTION PLANS

OF

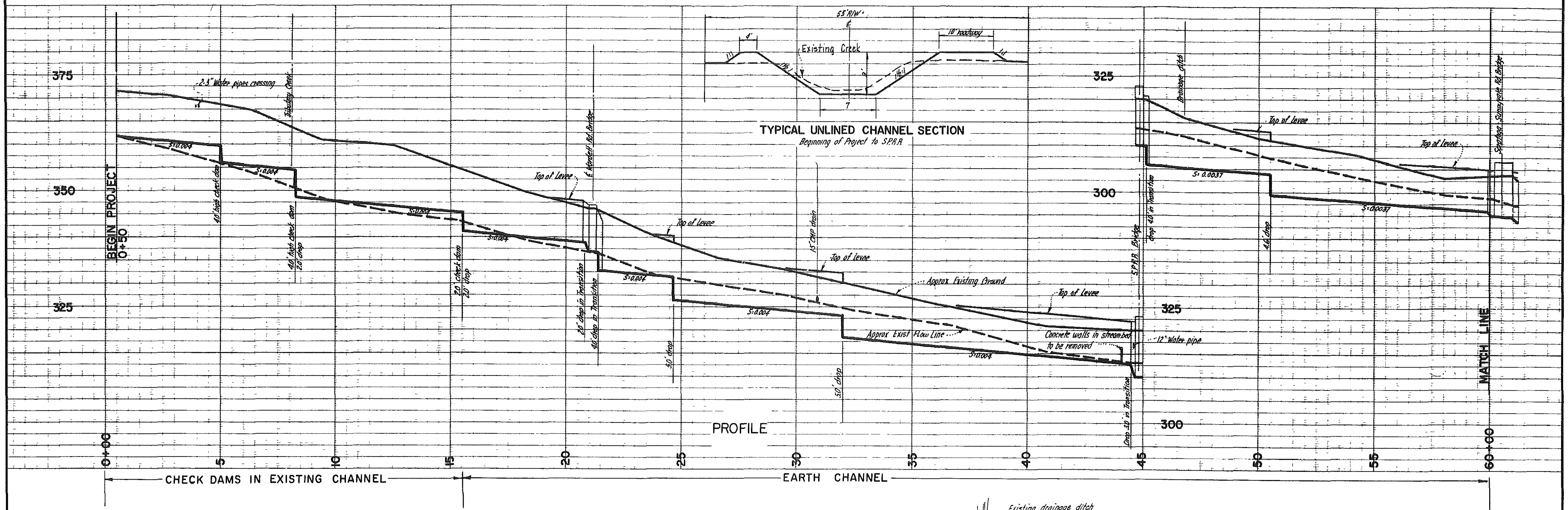
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 10

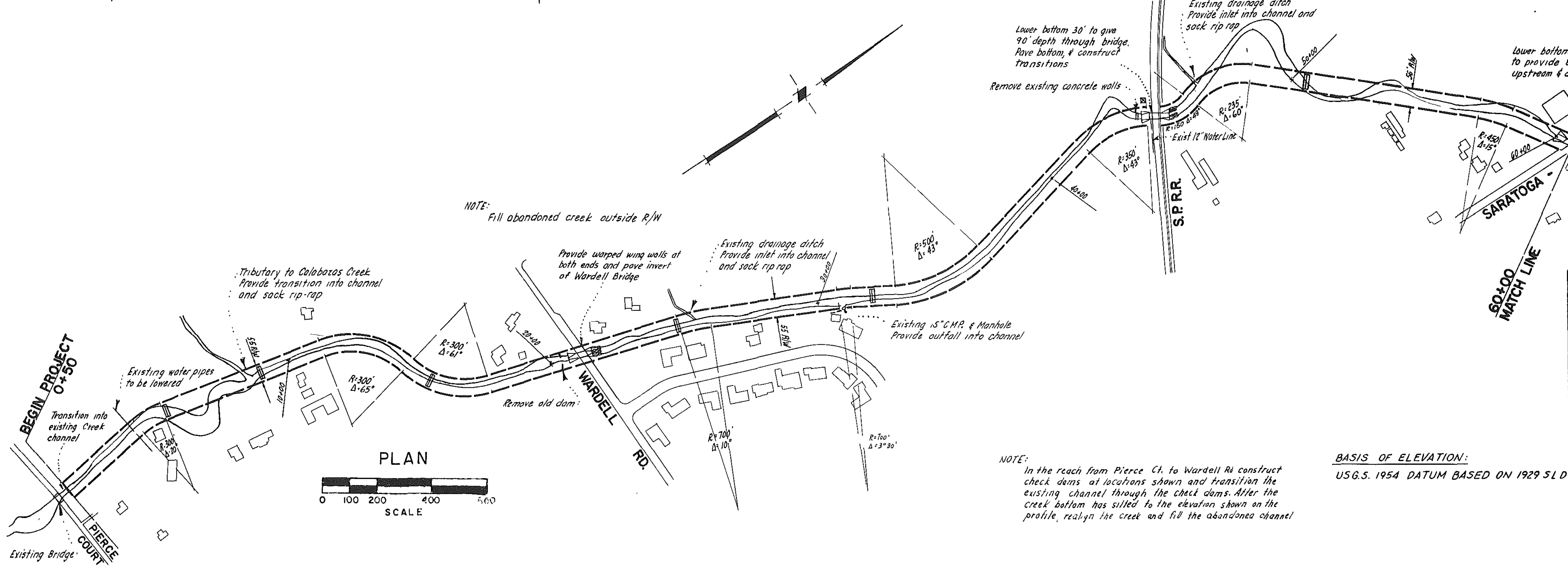
CALABAZAS CREEK IMPROVEMENT

FROM
PIERCE COURT TO EL CAMINO REAL

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA CLARA COUNTY, CALIFORNIA




PLAN
SCALE
0
100
200
400
500
BEGIN PROJECT 0+50
PIERCE COURT
Existing Bridge
Transition into existing Creek channel
Existing water pipes to be lowered
Tributary to Calabazas Creek Provide transition into channel and sack rip-rap
Remove old dam
WARDELL RD.
Provide warped wing walls at both ends and pave invert of Wardell Bridge
Existing drainage ditch Provide inlet into channel and sack rip rap
Existing 15" C.M.P. & Manhole Provide outfall into channel
R=300' Δ=61°
R=300' Δ=65°
R=700' Δ=10°
R=500' Δ=43°
R=350' Δ=43°
R=235' Δ=60°
R=450' Δ=15°
Lower bottom 3.0' to give 9.0' depth through bridge. Pave bottom, & construct transitions
Remove existing concrete walls
Exist 12" Water Line
S.P.R.R.
Existing drainage ditch Provide inlet into channel and sack rip rap
Lower bottom through culvert to provide 8' depth. Construct upstream & downstream transitions
SUNNYVALE RD.
SARATOGA
60+00 MATCH LINE

NOTE:
Fill abandoned creek outside R/W

NOTE:
In the reach from Pierce Ct. to Wardell Rd construct check dams at locations shown and transition the existing channel through the check dams. After the creek bottom has silted to the elevation shown on the profile, realign the creek and fill the abandoned channel

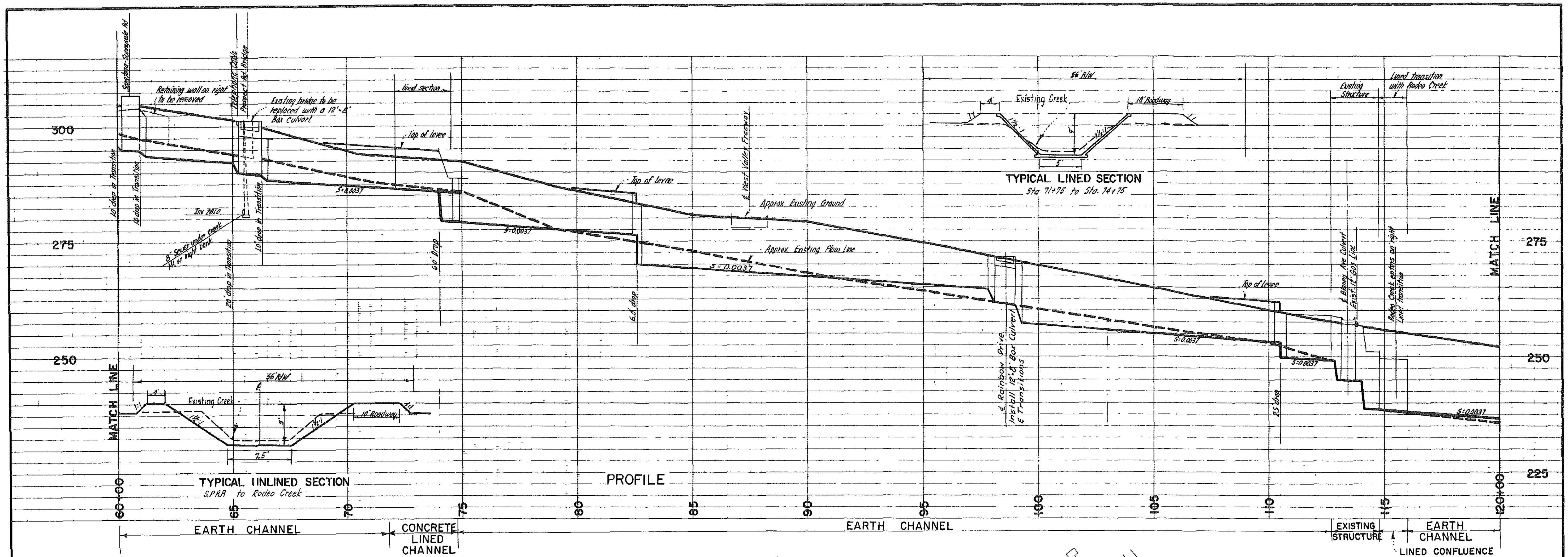
BASIS OF ELEVATION:
USG.S. 1954 DATUM BASED ON 1929 SLD

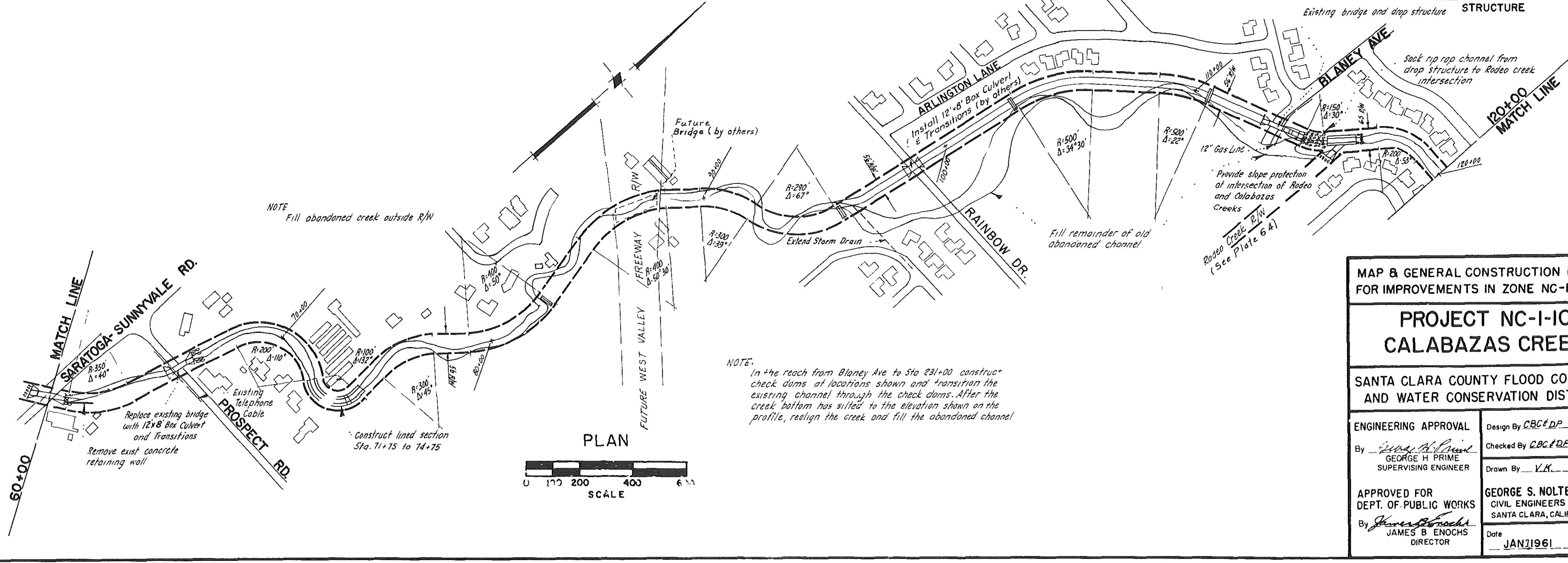
MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-10
CALABAZAS CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL By George H. Prime GEORGE H PRIME SUPERVISING ENGINEER	Design By CBC&DP Checked By CBC&DP	SCALE: As Shown
APPROVED FOR DEPT. OF PUBLIC WORKS By James B. Enochs JAMES B ENOCHS DIRECTOR	Drawn By V.K. GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF	JOB NO 1311
	Date JAN 7 1961	SHEET 2 OF 7




MATCH LINE
60+00
SARATOGA-SUNNYVALE RD.
R=350' Δ=40°
Replace existing bridge with 12'×8' Box Culvert and Transitions
Remove exist concrete retaining wall
PROSPECT RD.
Existing Telephone Cable
R=200' Δ=110°
70+00
R=100' Δ=132°
Construct lined section Sta. 71+75 to 74+75
R=300' Δ=45°
80+00
R=400' Δ=50°
FUTURE WEST VALLEY FREEWAY
R/W
R=400' Δ=50°30'
Future Bridge (by others)
90+00
R=300' Δ=39°
R=290' Δ=67°
Extend Storm Drain
56' R/W
ARLINGTON LANE
Install 12'×8' Box Culvert & Transitions (by others)
100+00
RAINBOW DR.
R=500' Δ=34°30'
R=500' Δ=22°
Fill remainder of old abandoned channel
110+00
56' R/W
12" Gas Line
Provide slope protection at intersection of Rodeo and Calabazas Creeks
Rodeo Creek R/W (See Plate 64)
Existing bridge and drop structure
BLANEY AVE
R=150' Δ=30°
65' R/W
R=200' Δ=53°
Sack rip rap channel from drop structure to Rodeo creek intersection
120+00
120+00 MATCH LINE
0 100 200 400 600
SCALE

PLAN

NOTE
Fill abandoned creek outside R/W

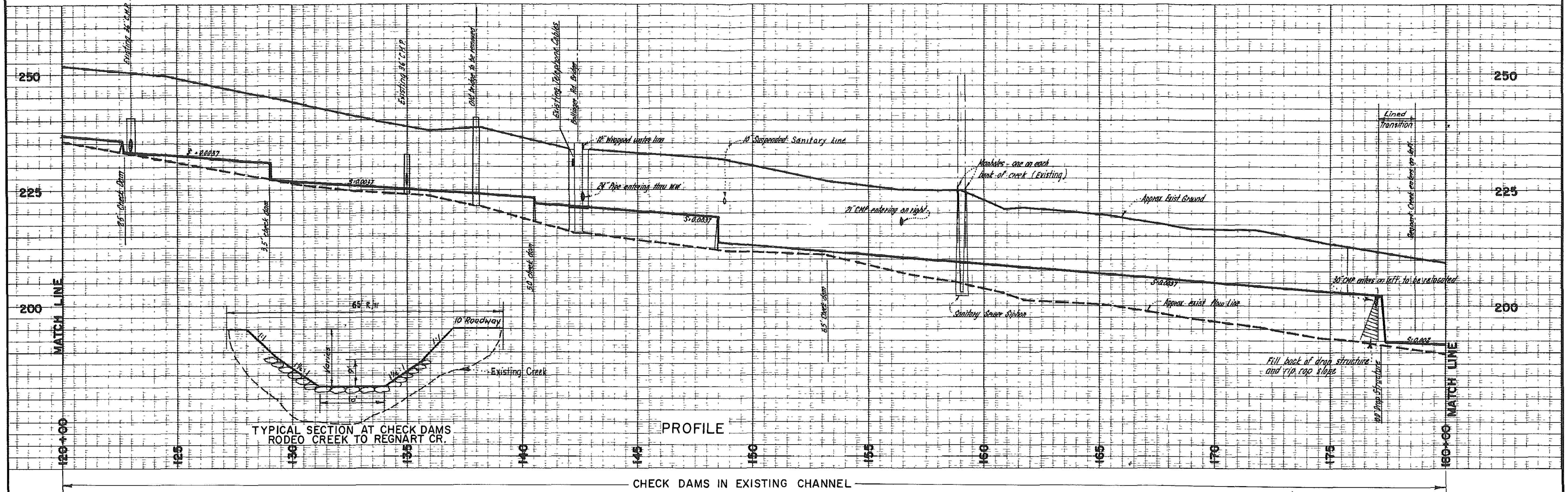
NOTE.
In the reach from Blaney Ave to Sta 231+00 construct check dams at locations shown and transition the existing channel through the check dams. After the creek bottom has silted to the elevation shown on the profile, realign the creek and fill the abandoned channel

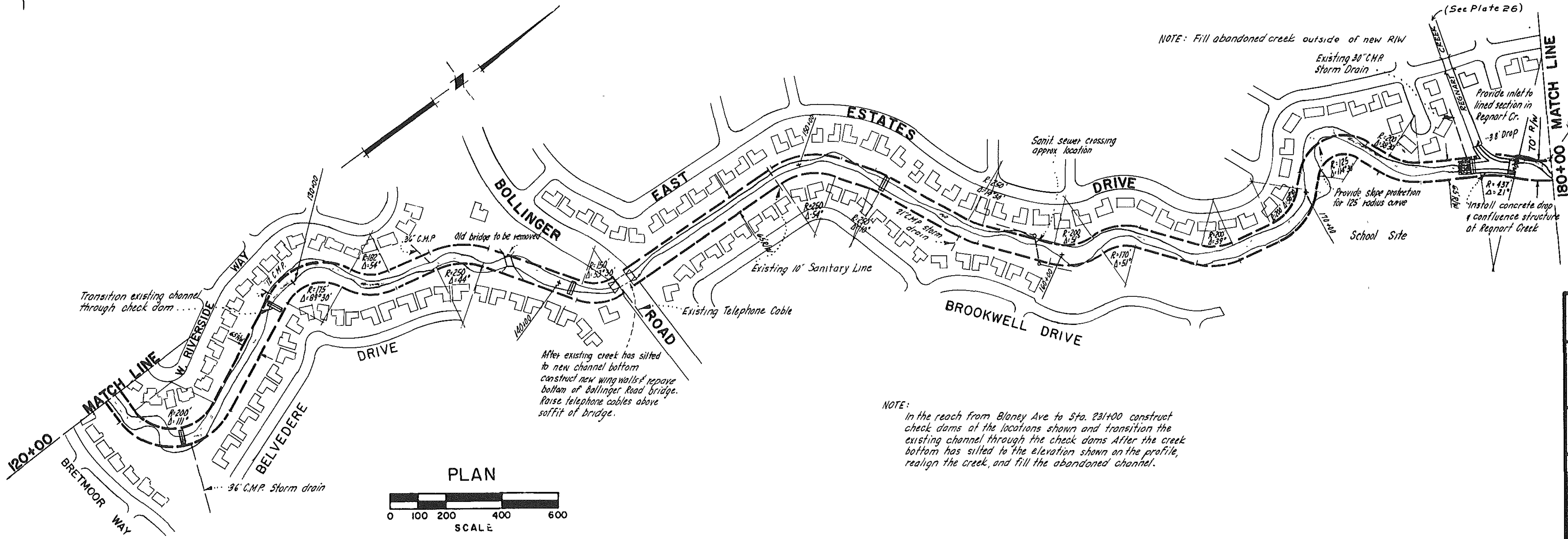
MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-10
CALABAZAS CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL By George H. Prime GEORGE H PRIME SUPERVISING ENGINEER	Design By CBC & DP Checked By CBC & DP	SCALE. As Shown
	Drawn By V.K.	JOB NO 1311
APPROVED FOR DEPT. OF PUBLIC WORKS By James B. Enochs JAMES B ENOCHS DIRECTOR	GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF Date JAN 1961	SHEET 3 OF 7




(See Plate 26)
NOTE: Fill abandoned creek outside of new R/W
Existing 30" CMP Storm Drain
REGNART CREEK
Provide inlet to lined section in Regnart Cr.
3.8' Drop
70' R/W
MATCH LINE
180+00
R=437' Δ=21°
Install concrete drop & confluence structure at Regnart Creek
School Site
Provide slope protection for 125' radius curve
R=125 Δ=114°30'
R=200' Δ=38°30'
170+00
ESTATES
DRIVE
Sanit. sewer crossing approx location
R=250' Δ=14°30'
R=200 Δ=51°
R=200 Δ=39°
R=170' Δ=51°
160+00
EAST
BOLLINGER
ROAD
21" CMP storm drain
Existing 10" Sanitary Line
BROOKWELL DRIVE
R=250 Δ=54°
150+00
R=150' Δ=53°30'
Existing Telephone Cable
Old bridge to be removed
36" C.M.P.
R=250 Δ=44°
140+00
R=182 Δ=54°
130+00
R=175 Δ=89°30'
W. RIVERSIDE
WAY
Transition existing channel through check dam
BELVEDERE
DRIVE
R=200' Δ=111°
MATCH LINE
120+00
BRETMOOR WAY
36" C.M.P. Storm drain
After existing creek has silted to new channel bottom construct new wing walls & repave bottom of Bollinger Road bridge. Raise telephone cables above soffit of bridge.
PLAN
0
100
200
400
600
SCALE

NOTE:
In the reach from Blaney Ave to Sta. 231+00 construct check dams at the locations shown and transition the existing channel through the check dams After the creek bottom has silted to the elevation shown on the profile, realign the creek, and fill the abandoned channel.

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-10
CALABAZAS CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
By George H. Prime
GEORGE H PRIME
SUPERVISING ENGINEER

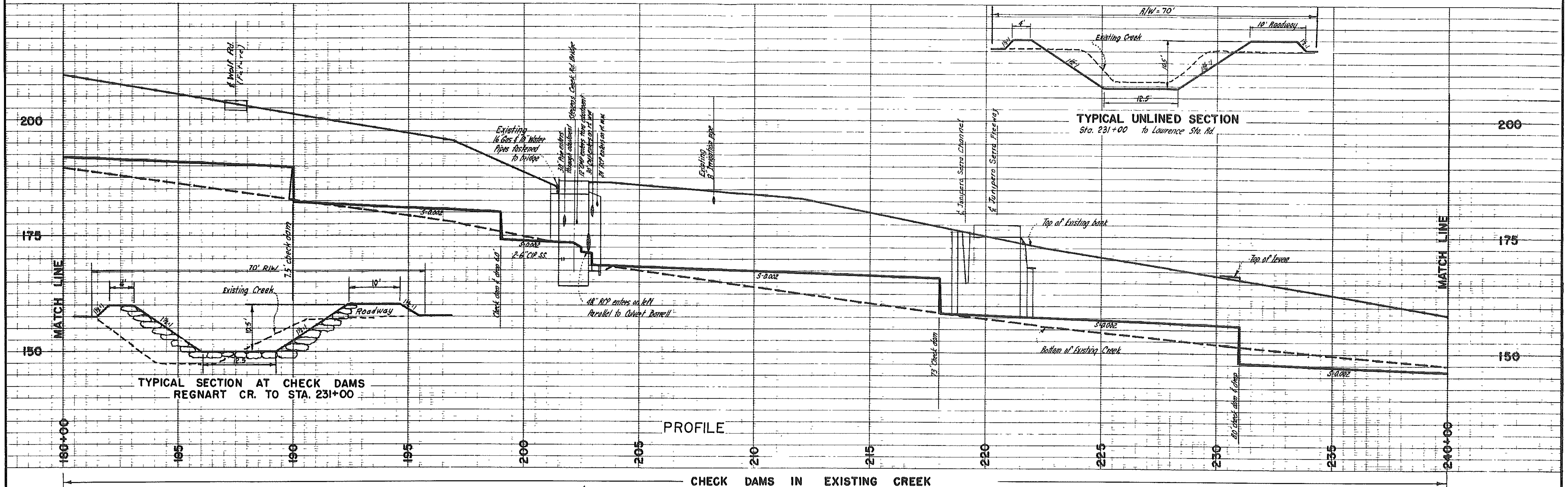
APPROVED FOR
DEPT. OF PUBLIC WORKS
By James B Enochs
JAMES B ENOCHS
DIRECTOR

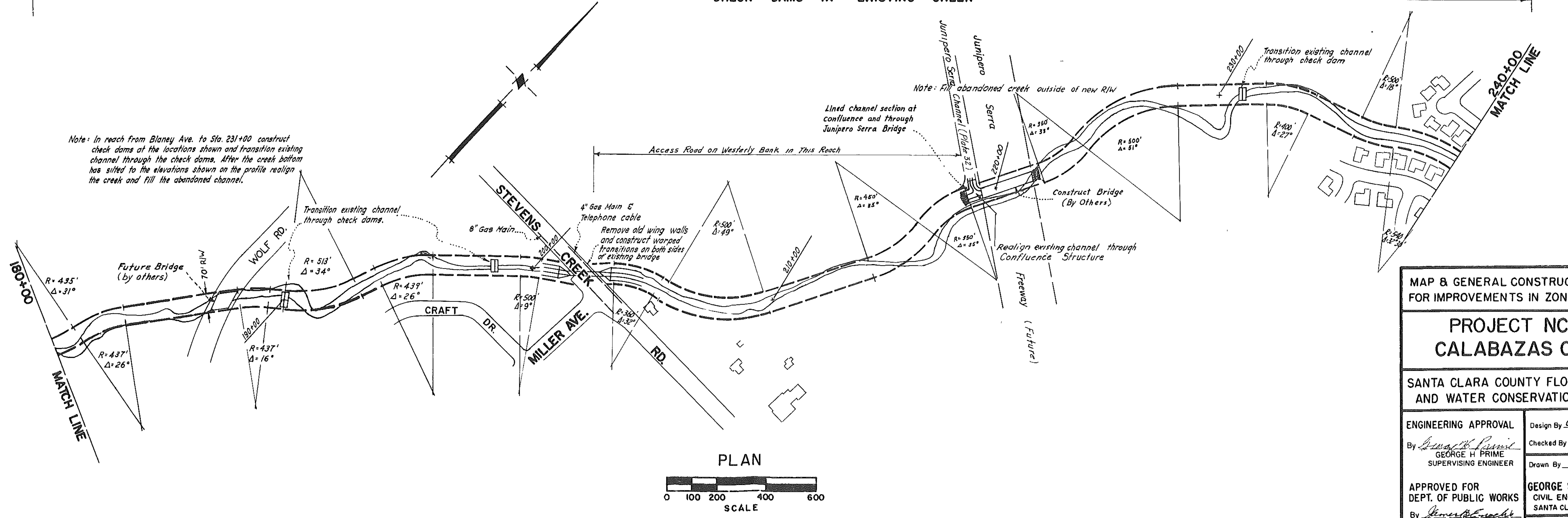
Design By CBC & D.P.
Checked By CBC & D.P.
Drawn By V.K.

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.

Date JAN. 7, 1961

SCALE: As Shown
JOB NO. 1311
SHEET 4 OF 7




180+00
MATCH LINE
R = 435'
Δ = 31°
R = 437'
Δ = 26°
Future Bridge (by others)
70' R/W
WOLF RD.
190+00
R = 513'
Δ = 34°
R = 437'
Δ = 16°
Transition existing channel through check dams.
R = 439'
Δ = 26°
CRAFT DR.
8" Gas Main
200+00
R = 500'
Δ = 9°
STEVENS CREEK RD.
MILLER AVE.
4" Gas Main & Telephone cable
Remove old wing walls and construct warped transitions on both sides of existing bridge
R = 360'
Δ = 32°
Access Road on Westerly Bank in This Reach
R = 500'
Δ = 49°
210+00
R = 450'
Δ = 35°
Lined channel section at confluence and through Junipero Serra Bridge
Junipero Serra Channel (Plate 32)
Junipero Serra Freeway (Future)
Note: Fill abandoned creek outside of new R/W
220+00
R = 350'
Δ = 35°
R = 350'
Δ = 35°
Construct Bridge (By Others)
Realign existing channel through Confluence Structure
R = 500'
Δ = 51°
230+00
Transition existing channel through check dam
R = 400'
Δ = 27°
R = 500'
Δ = 18°
R = 540'
Δ = 3°30'
240+00
MATCH LINE
PLAN
0
100
200
400
600
SCALE

Note: In reach from Blaney Ave. to Sta. 231+00 construct check dams at the locations shown and transition existing channel through the check dams. After the creek bottom has silted to the elevations shown on the profile realign the creek and fill the abandoned channel.

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-4 & 10
CALABAZAS CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
By George H. Prime
GEORGE H PRIME
SUPERVISING ENGINEER

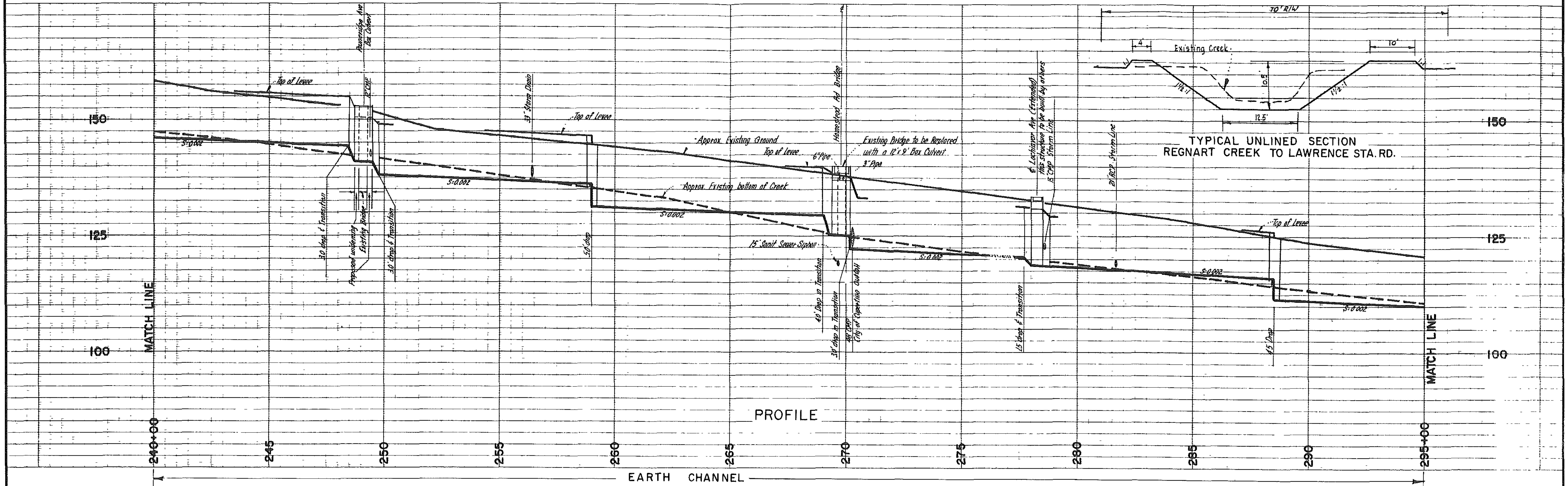
APPROVED FOR
DEPT. OF PUBLIC WORKS
By James B. Enochs
JAMES B ENOCHS
DIRECTOR

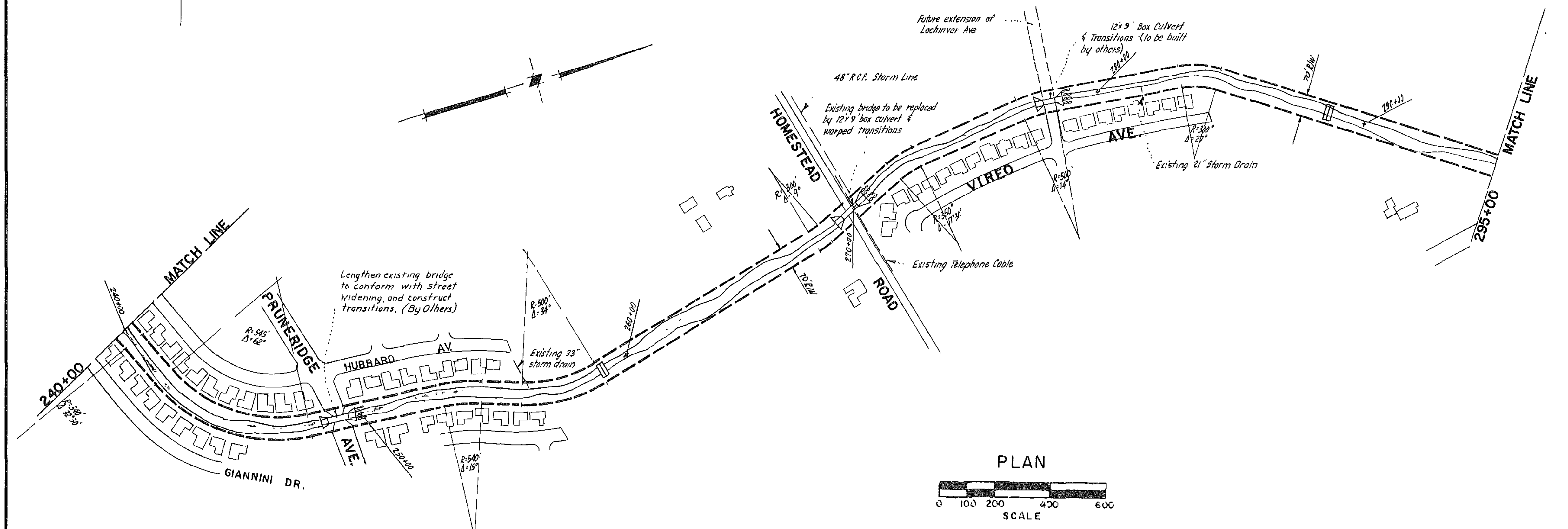
Design By CBC & DP
Checked By CBC & DP
Drawn By V.K.

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF

Date JAN 7, 1961

SCALE: As Shown
JOB NO. 1311
SHEET 5 OF 7



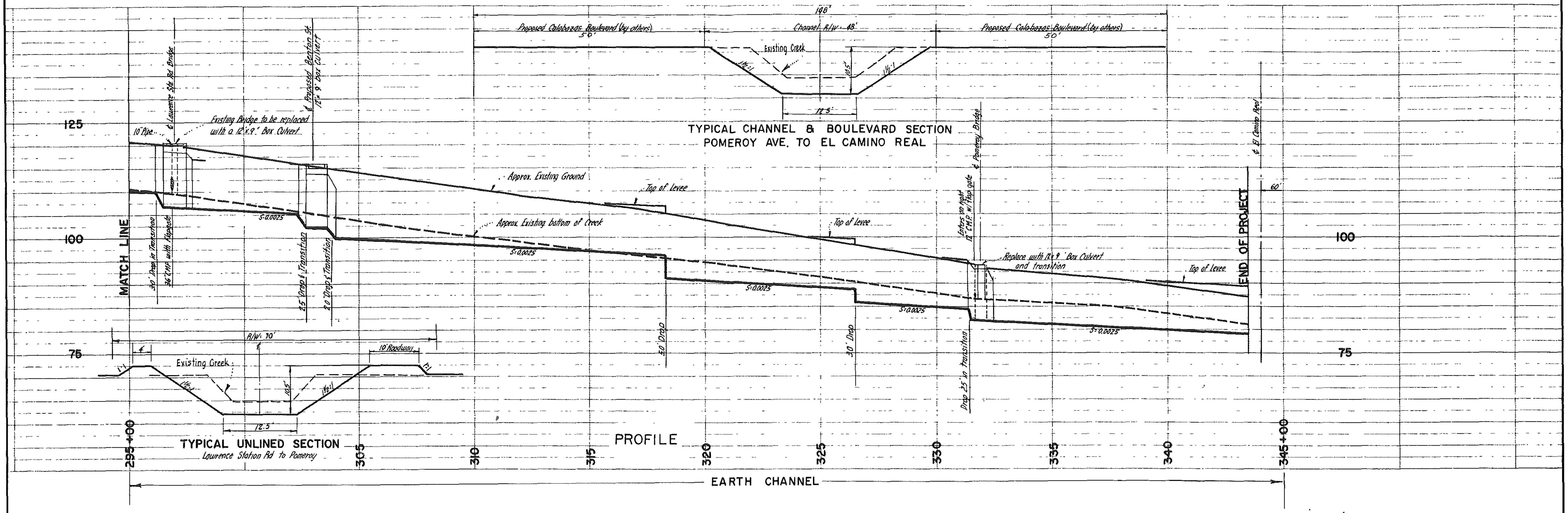


MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

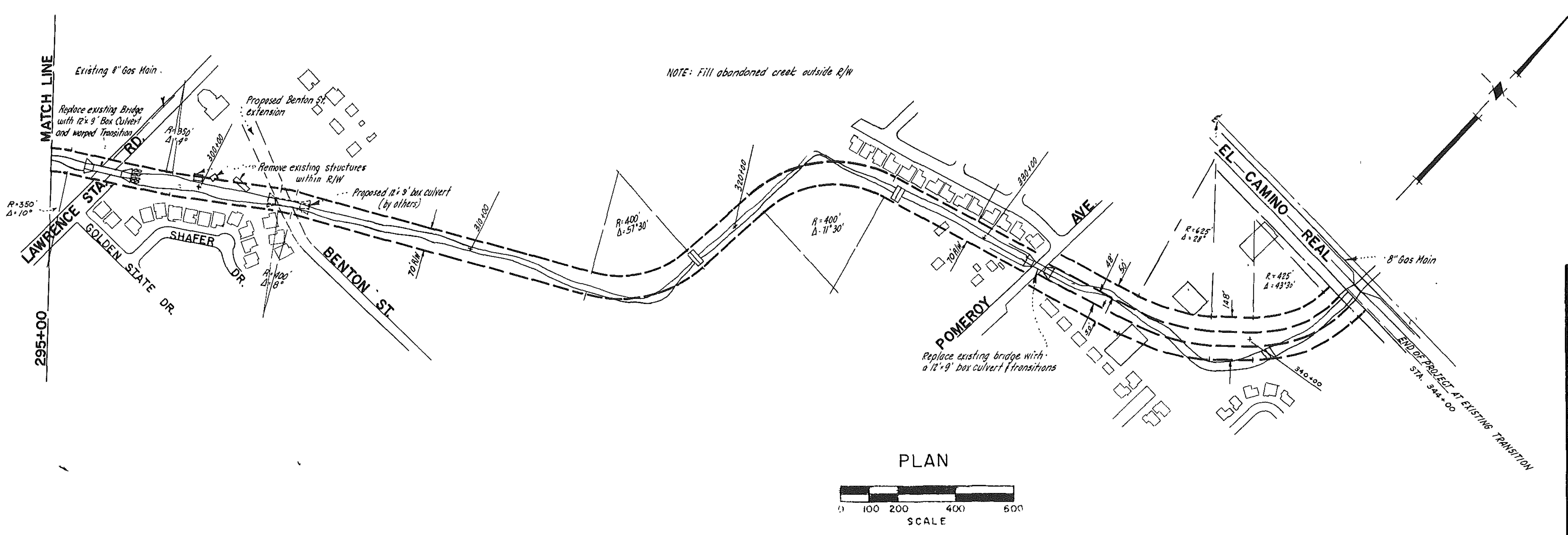
PROJECT NC-1-4
CALABAZAS CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL By George H. Prime GEORGE H PRIME SUPERVISING ENGINEER	Design By CBC & D.P. Checked By CBC & DP	SCALE As Shown
APPROVED FOR DEPT. OF PUBLIC WORKS By James B. Enochs JAMES B ENOCHS DIRECTOR	Drawn By VK GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF	JOB NO 1311
	Date JAN 1961	SHEET 6 OF 7



PROFILE



MATCH LINE
295+00
Existing 8" Gas Main
Replace existing Bridge with 12'x9' Box Culvert and warped Transition
R=350' Δ=10°
R=350' Δ=4°
LAWRENCE STA. RD.
GOLDEN STATE DR.
SHAFER DR.
300+00
Proposed Benton St. extension
Remove existing structures within R/W
Proposed 12'x9' box culvert (by others)
R=400' Δ=8°
BENTON ST.
70' R/W
310+00
NOTE: Fill abandoned creek outside R/W
R=400' Δ=57°30'
320+00
R=400' Δ=11°30'
70' R/W
330+00
POMEROY AVE.
Replace existing bridge with a 12'x9' box culvert & transitions
48'
50'
50'
R=625' Δ=28°
148'
R=425' Δ=43°30'
EL CAMINO REAL
8" Gas Main
340+00
END OF PROJECT AT EXISTING TRANSITION
STA. 344+00
0 100 200 400 600
SCALE

PLAN

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-4
CALABAZAS CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
By George H. Prime
GEORGE H PRIME
SUPERVISING ENGINEER

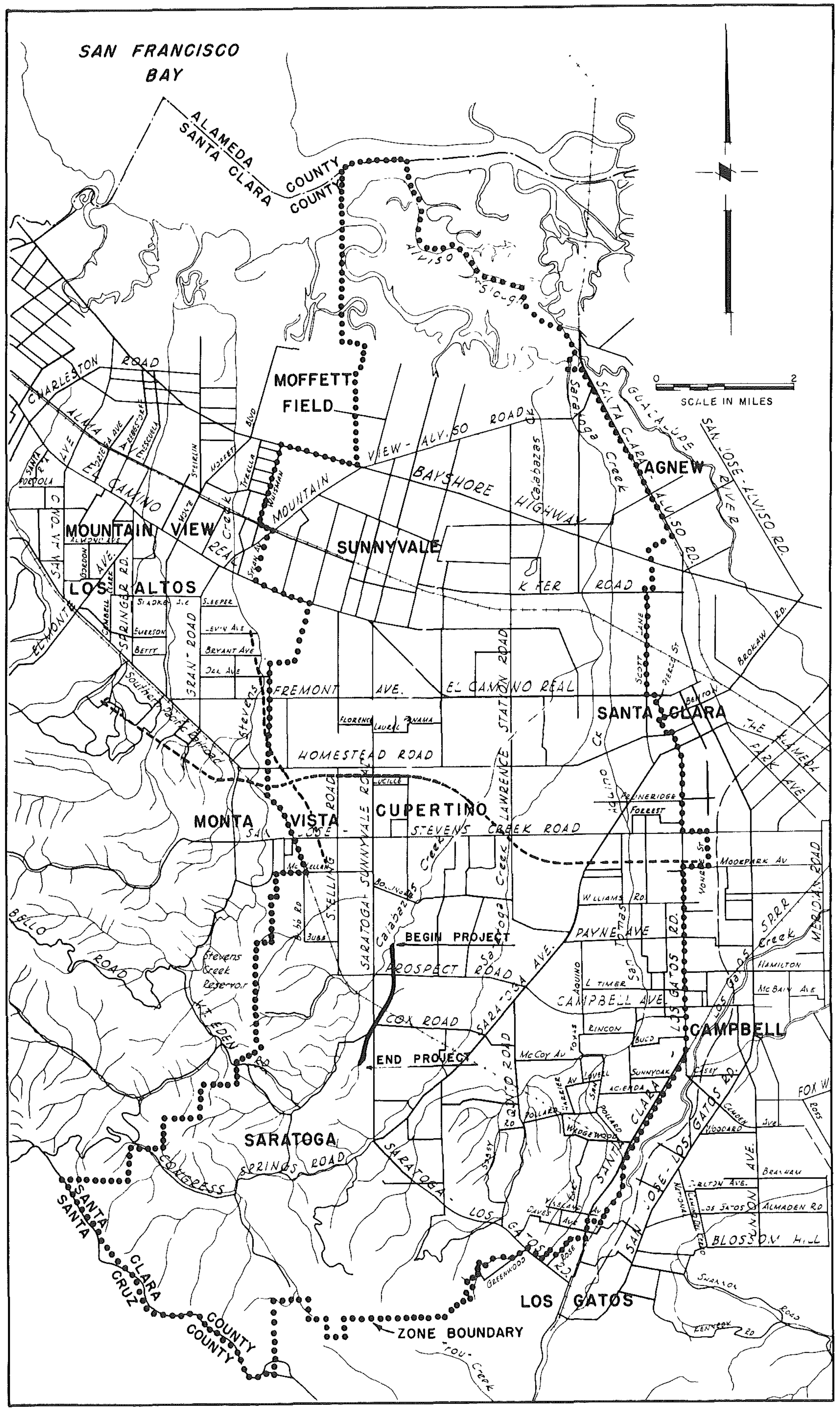
APPROVED FOR
DEPT. OF PUBLIC WORKS
By James B Enochs
JAMES B ENOCHS
DIRECTOR

Design By CBC & DP
Checked By CBC & DP
Drawn By V.K.

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.

Date JAN 7 1961

SCALE: As Shown
JOB NO 1311
SHEET 7 OF 7



MAP AND GENERAL CONSTRUCTION PLANS

OF

ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 15

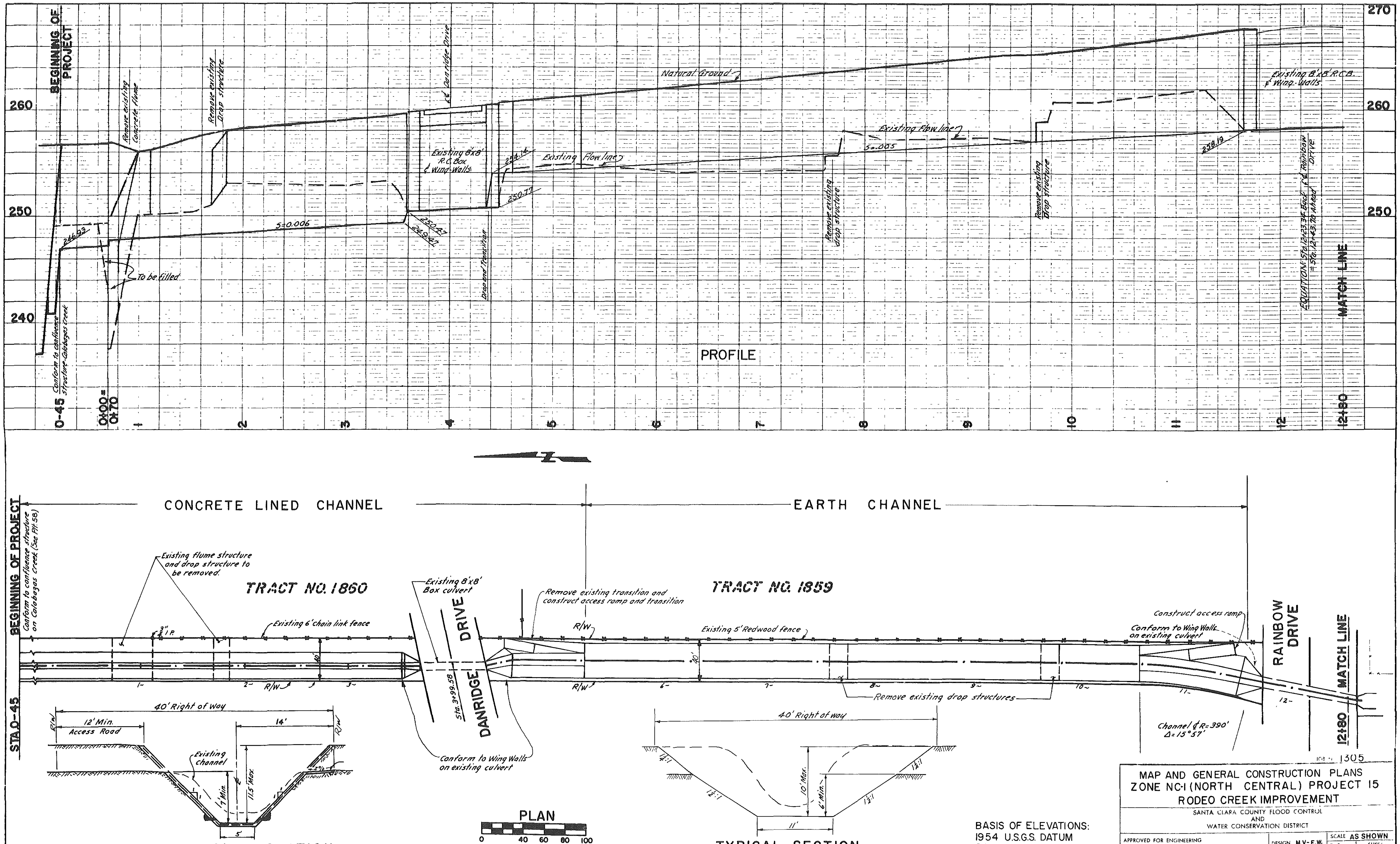
RODEO CREEK IMPROVEMENT

FROM LEONARD AVE. TO CALABAZAS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA CLARA COUNTY, CALIFORNIA

PLATE 63


270
260
250
240
BEGINNING OF PROJECT
Conform to confluence structure-Calabazas Creek
Remove existing Concrete flume
Remove existing drop structure
℄ Danridge Drive
Natural Ground
Existing 8'x8' R.C Box & Wing-Walls
Drop and Transition
254.14
250.77
Existing Flow line
Existing Flow line
S=.005
S=0.006
246.93
246.93
250.47
249.47
To be filled
Remove existing drop structure
Remove existing drop structure
258.19
Existing 8'x8' R.C.B. & Wing-Walls
EQUATION: Sta.12+23.34 Back ℄ Rainbow Drive = Sta. 12+43.70 Ahead
MATCH LINE
0-45
0+00=0+70
1
2
3
4
5
6
7
8
9
10
11
12
12+80
CONCRETE LINED CHANNEL
EARTH CHANNEL
BEGINNING OF PROJECT
Conform to confluence structure on Calabazas Creek (See Pl. 58)
STA 0-45
Existing flume structure and drop structure to be removed.
TRACT NO. 1860
TRACT NO. 1859
Existing 6' chain link fence
Existing 8'x8' Box culvert
DANRIDGE DRIVE
Sta. 3+99.58
Conform to Wing Walls on existing culvert
Remove existing transition and construct access ramp and transition
Existing 5' Redwood fence
R/W
40'
Remove existing drop structures
Construct access ramp
Conform to Wing Walls on existing culvert
RAINBOW DRIVE
MATCH LINE
12+80
Channel ℄ R=390'
Δ=15°57'
40' Right of Way
12' Min.
Access Road
14'
R/W
Existing channel
1' Min.
11.5' Max.
5'
40' Right of way
1½:1
10' Max.
6' Min.
11'
0
40
60
80
100
SCALE

PROFILE

PLAN

TYPICAL SECTION
FROM STA. 0-45 TO STA. 5+25
N.T.S.

TYPICAL SECTION
FROM STA. 5+25 TO RAINBOW DR
N.T.S.

BASIS OF ELEVATIONS:
1954 U.S.G.S. DATUM
BASED ON 1929 S.L.D.

JOB N. 1305

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 15
RODEO CREEK IMPROVEMENT

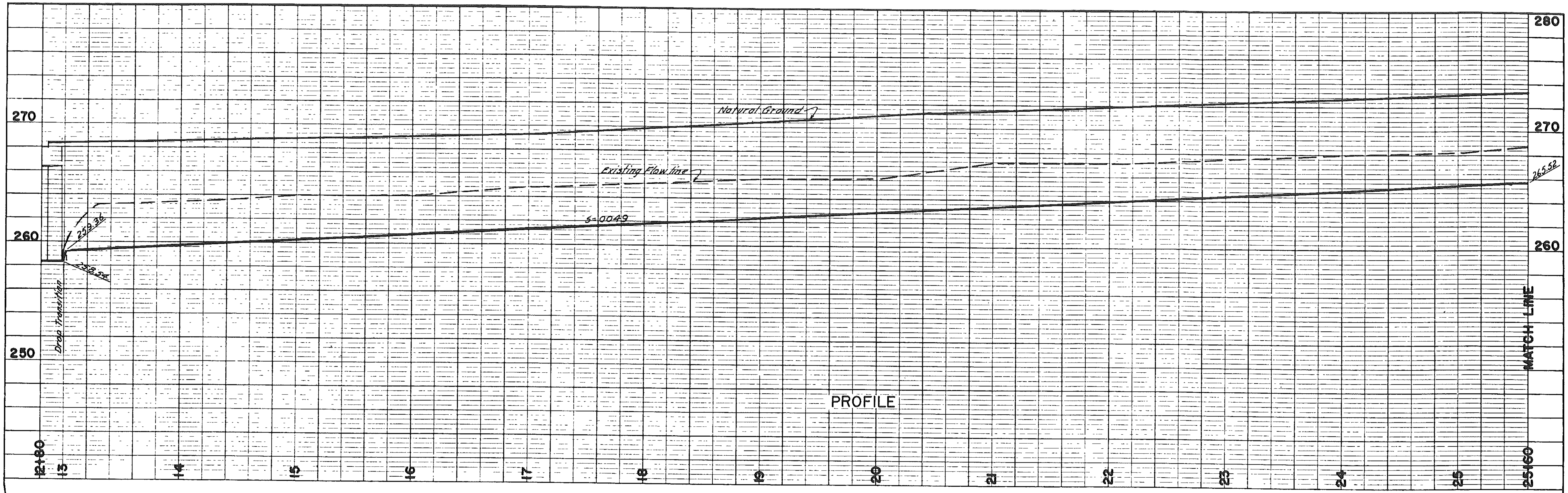
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Prime
GEORGE H. PRIME SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS DIRECTOR

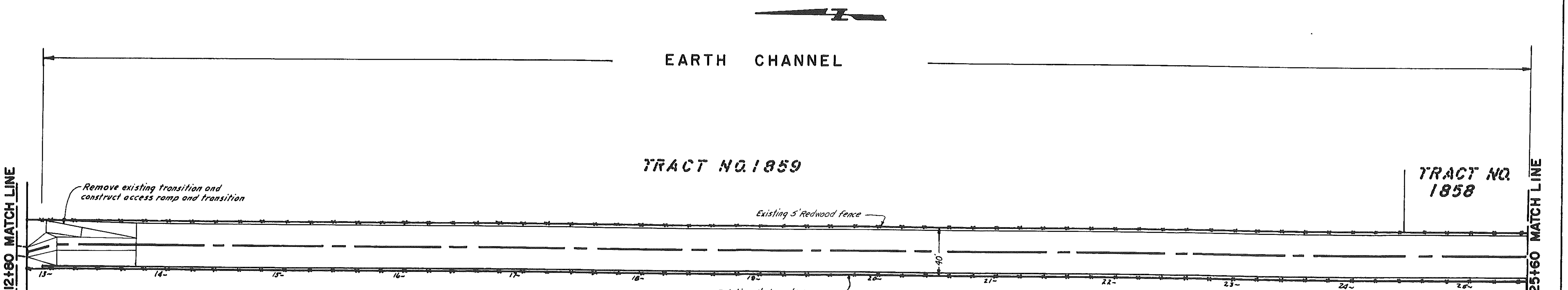
DESIGN M.V-E.W.
DRAWN N.S.-A.D-RE
CHECKED M.E.B.
DATE
JAN.7 1961

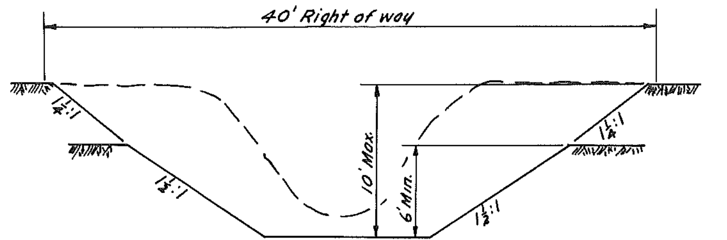
SCALE AS SHOWN
T.B. 171
L.B. 230
SHEET 2
OF 11
FILE NO

PLATE 64



PROFILE





TYPICAL SECTION
FROM RAINBOW DR. TO PROSPECT RD.
N. T. S.

PLAN

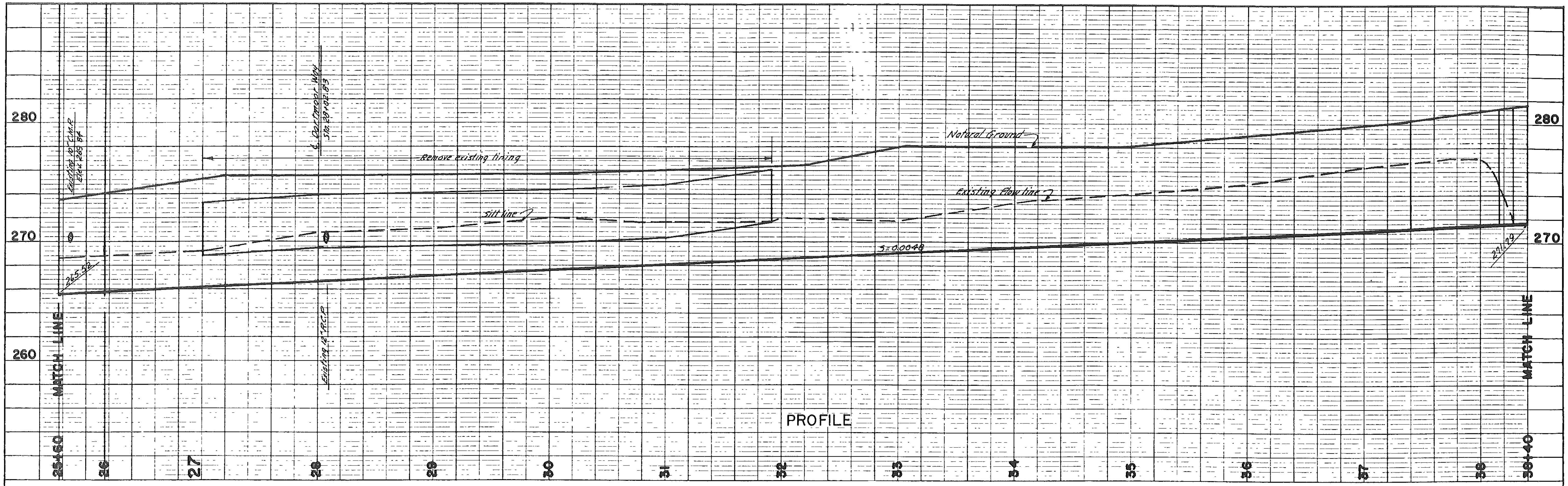
JOB NO 1305

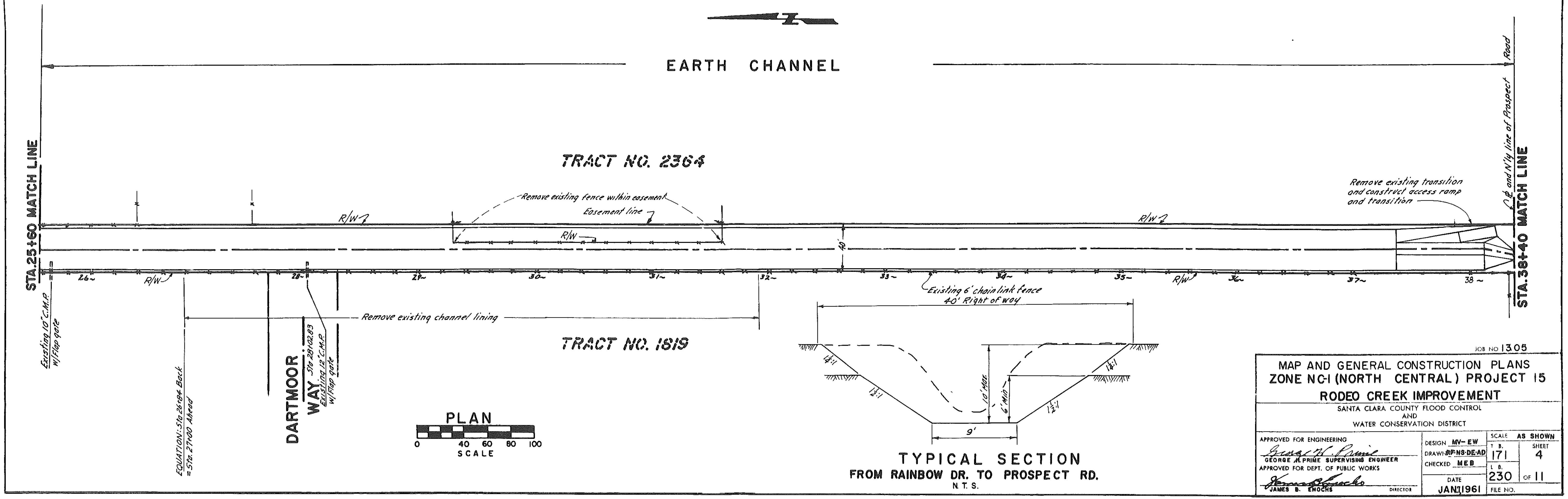
MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-I (NORTH CENTRAL) PROJECT 15
RODEO CREEK IMPROVEMENT

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING George H. Prime GEORGE H. PRIME SUPERVISING ENGINEER	DESIGN MV-EW DRAWN RF CHECKED MEB	SCALE: AS SHOWN	
		T. B. 171	SHEET 3
APPROVED FOR DEPT. OF PUBLIC WORKS James B Enochs JAMES B ENOCHS DIRECTOR	DATE JAN 7 1961	L. B. 230	OF 11
		FILE NO.	

PLATE 65




N
EARTH CHANNEL
Road
℄ and N'ly line of Prospect
TRACT NO. 2364
STA.25+60 MATCH LINE
STA.38+40 MATCH LINE
Remove existing fence within easement
Easement line
R/W
R/W
R/W
R/W
R/W
40'
Remove existing transition and construct access ramp and transition
26
28
29
30
31
32
33
34
35
36
37
38
Existing 6' chain link fence 40' Right of way
Remove existing channel lining
Existing 10" C.M.P. w/Flap gate
EQUATION: Sta 26+84 Back = Sta. 27+00 Ahead
DARTMOOR WAY Sta 28+02.83
Existing 12" C.M.P. w/Flap gate
TRACT NO. 1819
PLAN
0 40 60 80 100
SCALE
40' Right of way
1½:1
1½:1
1½:1
1½:1
10' Max.
6' min.
9'
TYPICAL SECTION
FROM RAINBOW DR. TO PROSPECT RD.
N.T.S.

JOB NO 1305

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 15
RODEO CREEK IMPROVEMENT

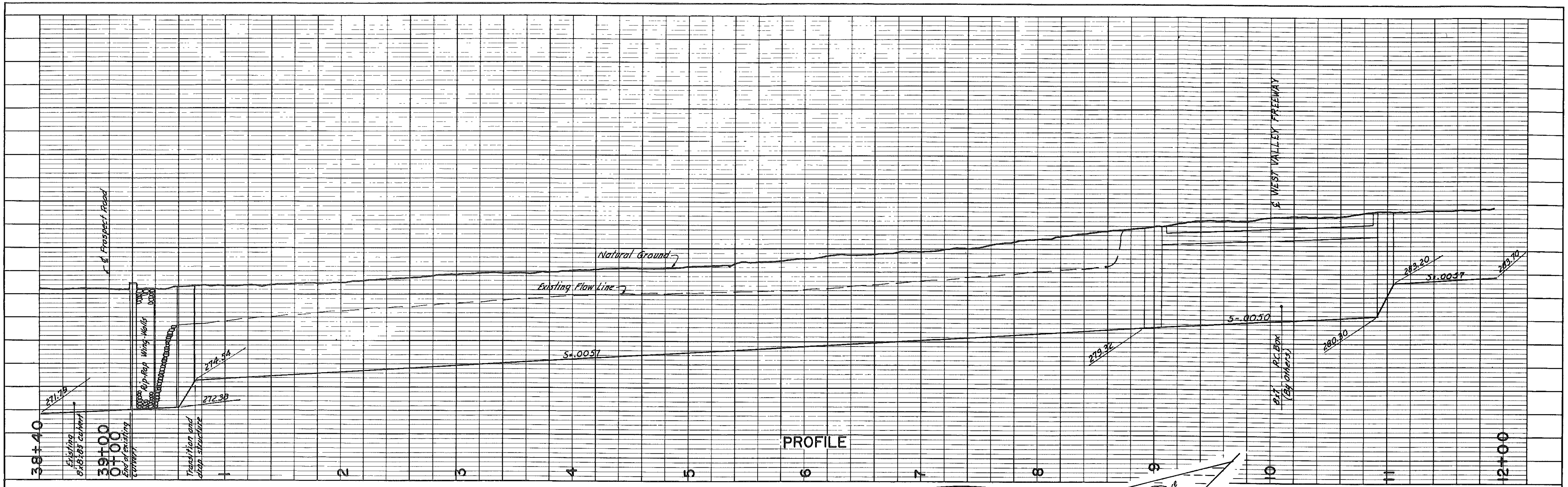
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Prime
GEORGE H. PRIME SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS DIRECTOR

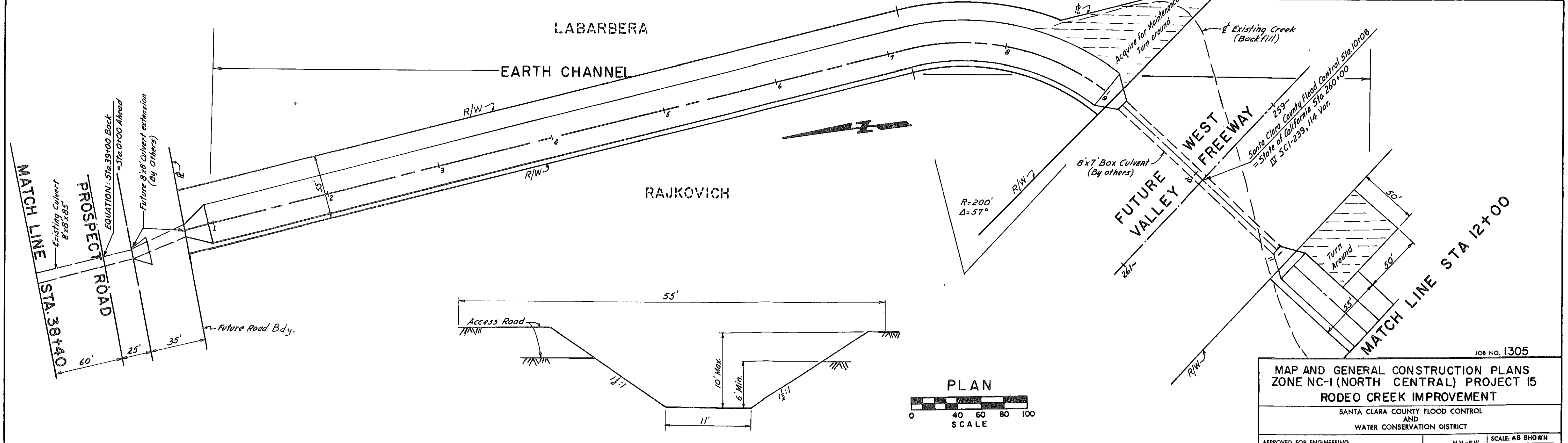
DESIGN MV-EW
DRAWN RF·NS·DE·AD
CHECKED MEB
DATE JAN. 1961

SCALE AS SHOWN
T. B. 171
L. B. 230
SHEET 4 OF 11
FILE NO.

PLATE 66



PROFILE


LABARBERA
EARTH CHANNEL
RAJKOVICH
R/W
℄
MATCH LINE
STA. 38+40
Existing Culvert 8'x8'x85'
PROSPECT ROAD
EQUATION: Sta.39+00 Back =Sta.0+00 Ahead
Future 8'x8' Culvert extension (By Others)
Future Road Bdy.
60'
25'
35'
55'
R=200'
Δ=57°
Acquire for Maintenance Turn around
℄ Existing Creek (Backfill)
8'x7' Box Culvert (By others)
FUTURE WEST VALLEY FREEWAY
Santa Clara County Flood Control Sta.10+08 =State of California Sta. 260+00 IV SCl-239, 114 Var.
259
261
Turn Around
50'
50'
55'
MATCH LINE STA 12+00
Access Road
1½:1
1½:1
10' Max.
6' Min.
11'
0
40
60
80
100
SCALE

PLAN

TYPICAL SECTION

PROSPECT RD. TO STA. 34+16

N. T. S.

JOB NO. 1305

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 15
RODEO CREEK IMPROVEMENT

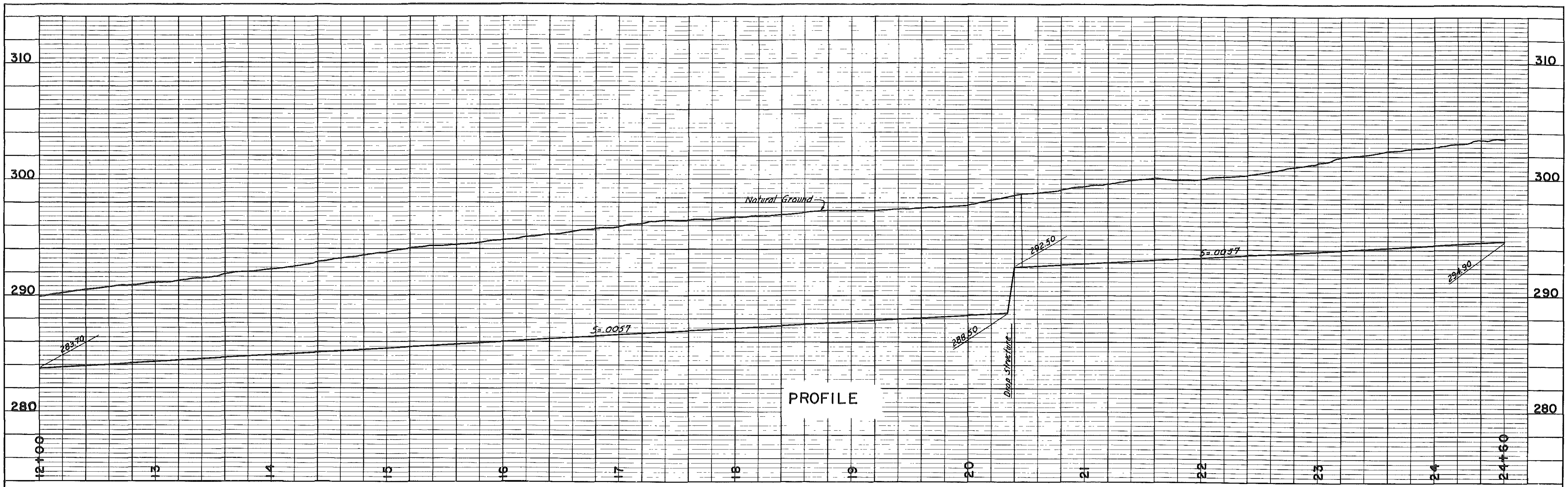
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS DIRECTOR

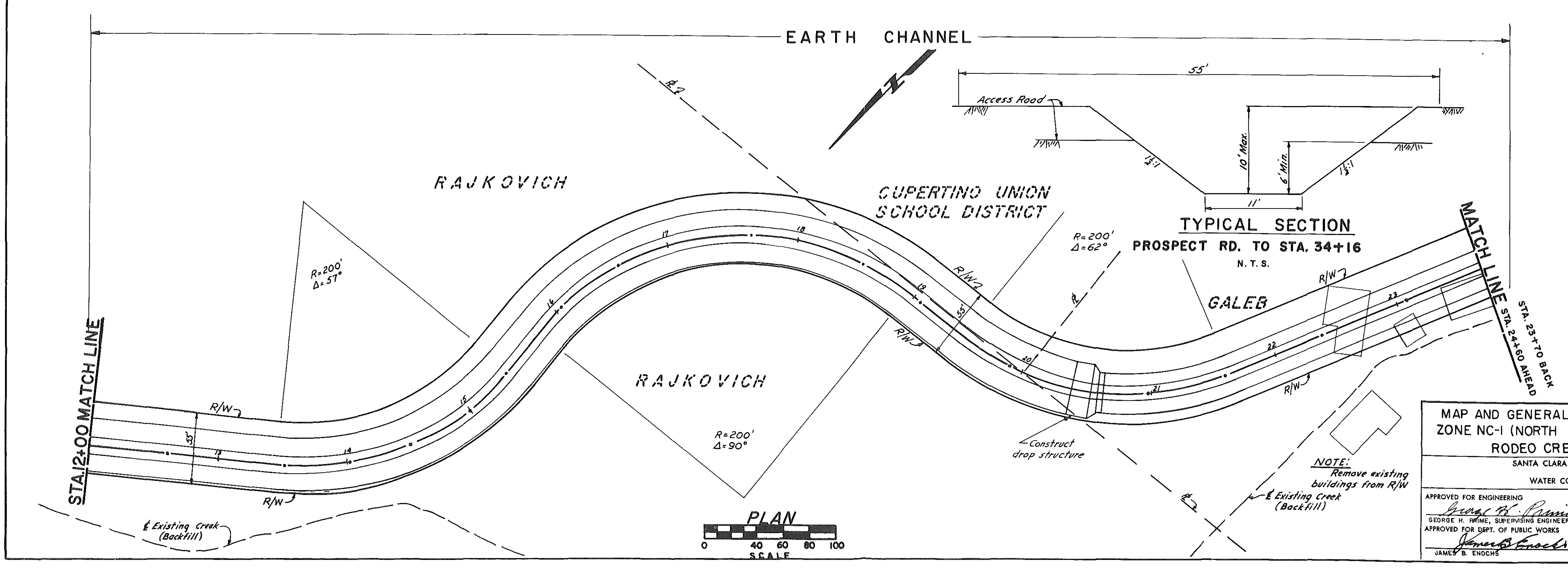
DESIGN MV-EW
DRAWN MV
CHECKED MEB
DATE
JAN 3 1961

SCALE: AS SHOWN
T. B. 171
L. B. 230
SHEET 5 OF 11
FILE NO.

PLATE 67



PROFILE



TYPICAL SECTION
PROSPECT RD. TO STA. 34+16
N. T. S.

PLAN

JOB NO 1305

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 15
RODEO CREEK IMPROVEMENT

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

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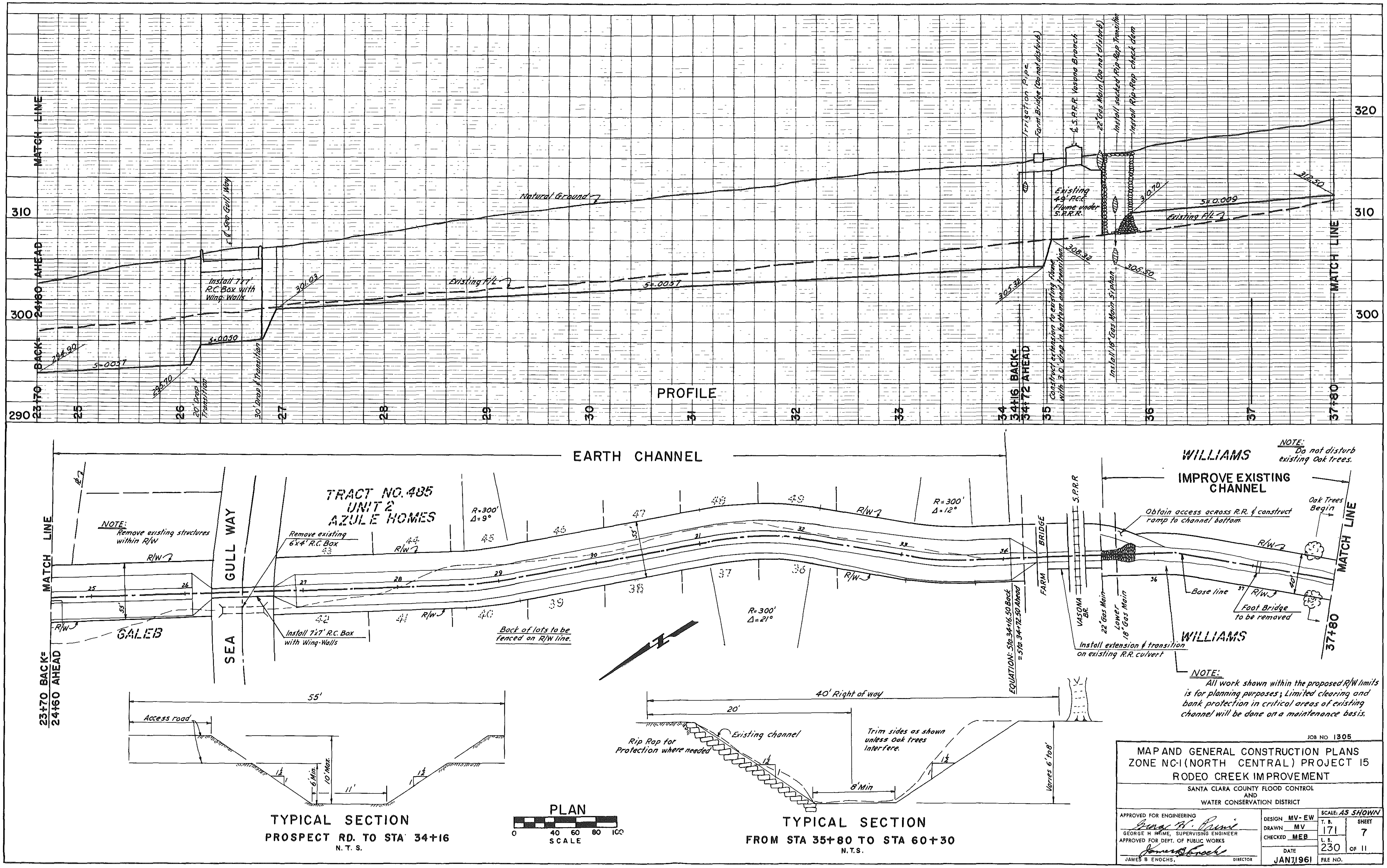
George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS DIRECTOR

DESIGN MV-EW
DRAWN MV
CHECKED MEB
DATE
JAN 7 1961

SCALE. AS SHOWN
T. B. 171
L. B. 230
SHEET 6 OF 11
FILE NO.

PLATE 68



NOTE:
Remove existing structures within R/W

NOTE:
Do not disturb existing Oak trees.

NOTE:
All work shown within the proposed R/W limits is for planning purposes; Limited clearing and bank protection in critical areas of existing channel will be done on a maintenance basis.

JOB NO 1305

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 15
RODEO CREEK IMPROVEMENT

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

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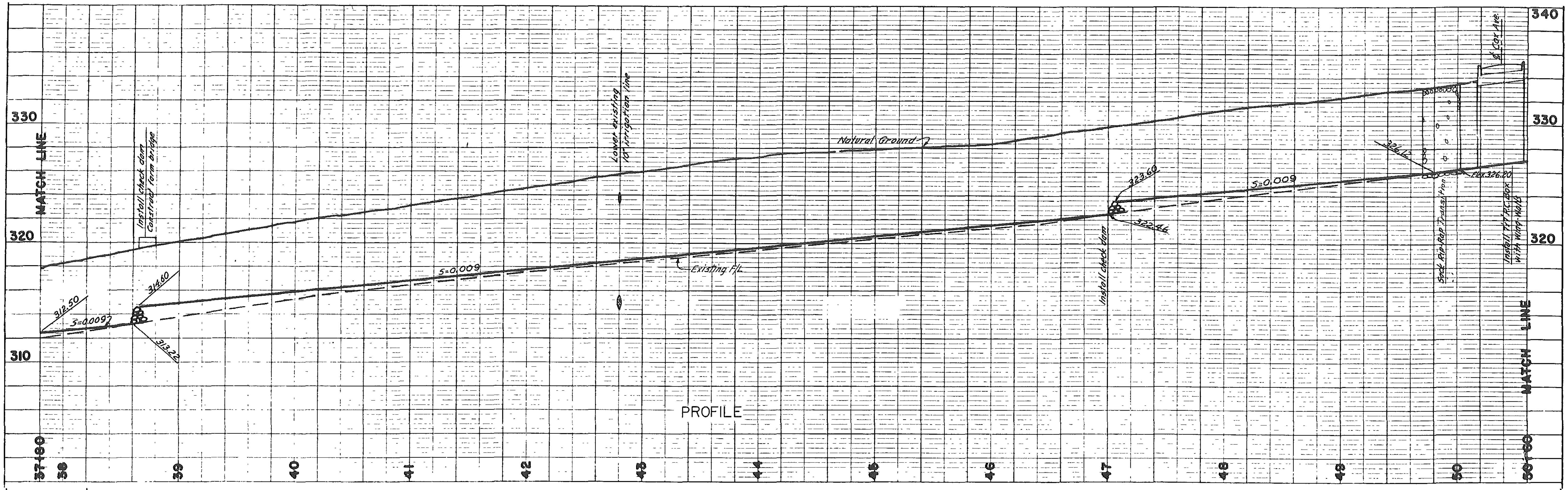
George H. Prime
GEORGE H PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B Enochs
JAMES B ENOCHS, DIRECTOR

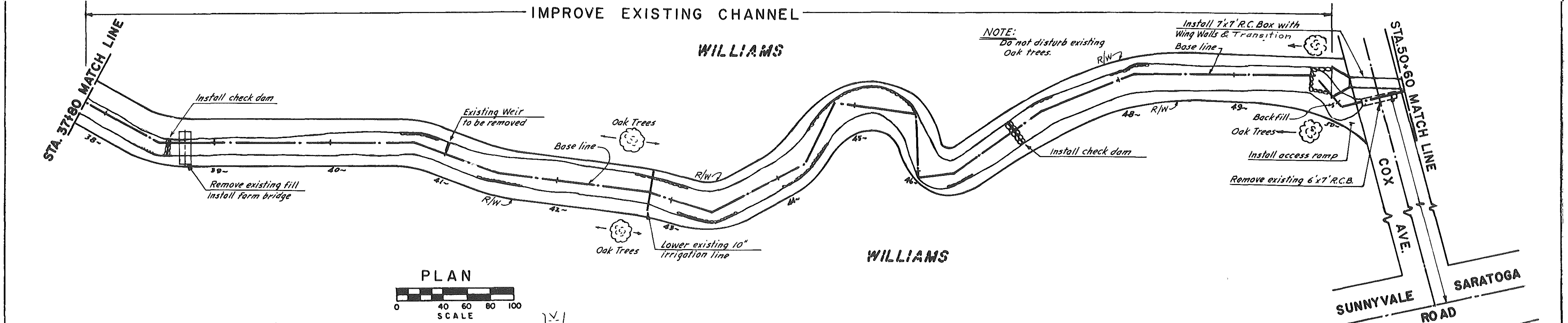
DESIGN MV-EW
DRAWN MV
CHECKED MEB
DATE JAN 1 1961

SCALE: AS SHOWN
T. B. 171
L. B. 230
SHEET 7 OF 11
FILE NO.

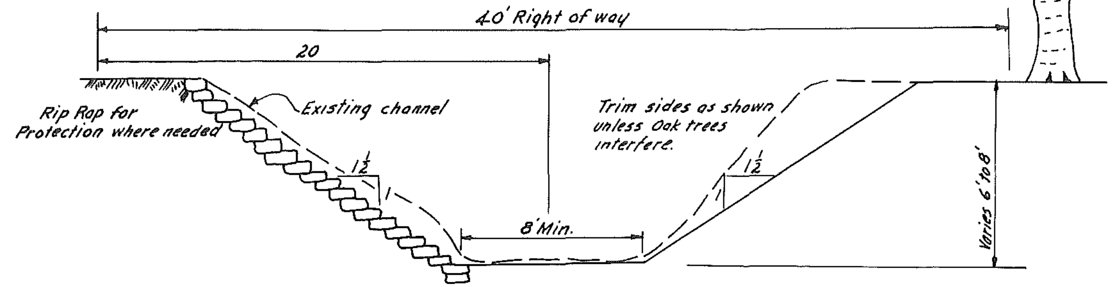
PLATE 69



PROFILE



PLAN


40' Right of way
20
Rip Rap for Protection where needed
Existing channel
1½
1
8' Min.
Trim sides as shown unless Oak trees interfere.
1½
1
Varies 6' to 8'

TYPICAL SECTION
FROM STA. 35+80 TO STA. 60+30
N. T. S.

NOTE:
All work shown within the proposed R/W limits is for planning purposes; Limited clearing and bank protection in critical areas of existing channel will be done on a maintenance basis.

JOB NO. 1305

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 15
RODEO CREEK IMPROVEMENT

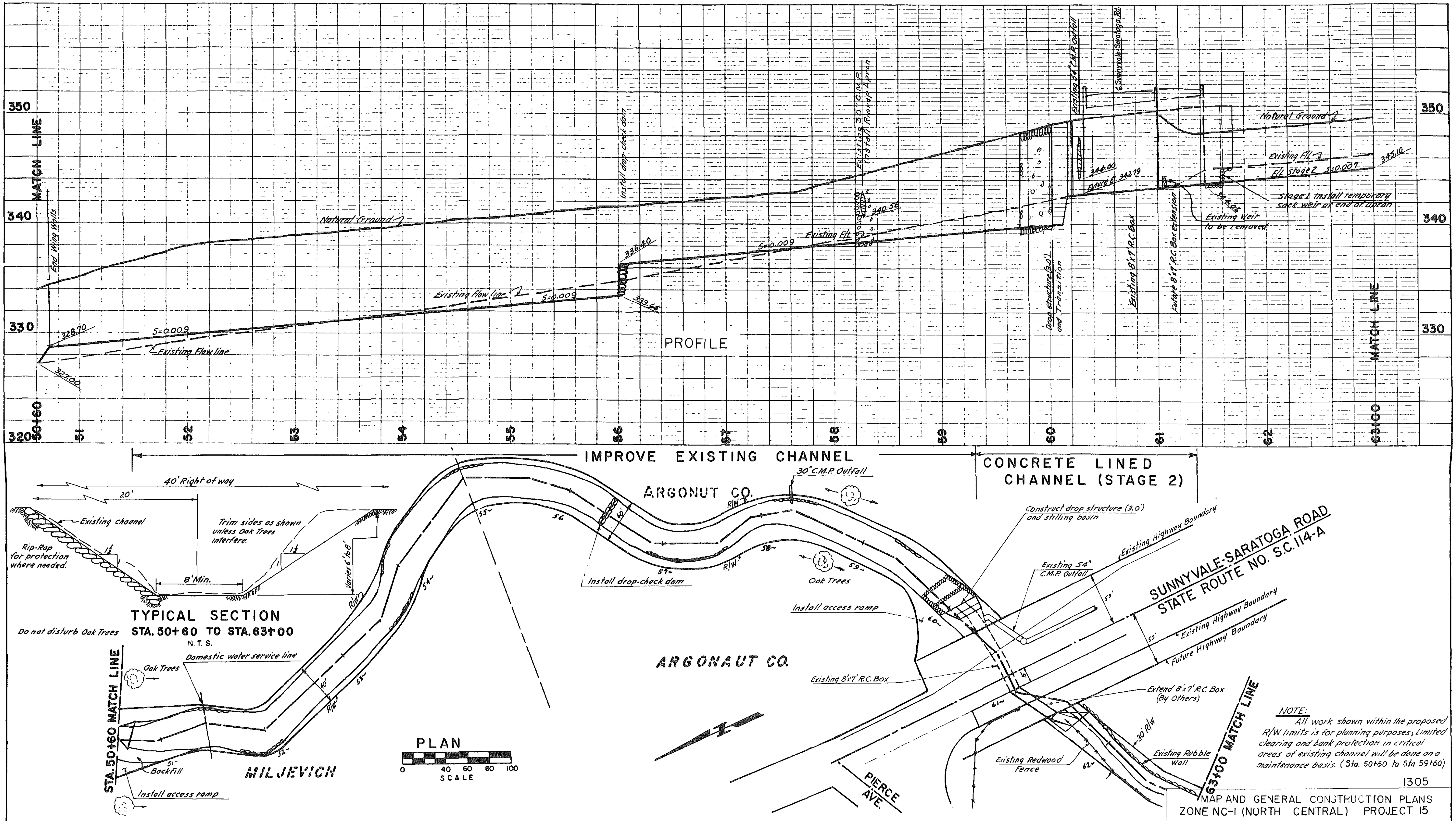
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Prime
GEORGE H. PRIME SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS DIRECTOR

DESIGN MV-EW
DRAWN RJF-NS-AD
CHECKED MEB
DATE
JAN 7 1961

SCALE: AS SHOWN
T. B. 171
L. B. 230
SHEET 8 OF 11
FILE NO.

PLATE 70



NOTE:
All work shown within the proposed R/W limits is for planning purposes; Limited clearing and bank protection in critical areas of existing channel will be done on a maintenance basis. (Sta. 50+60 to Sta 59+60)

1305

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 15
RODEO CREEK IMPROVEMENT

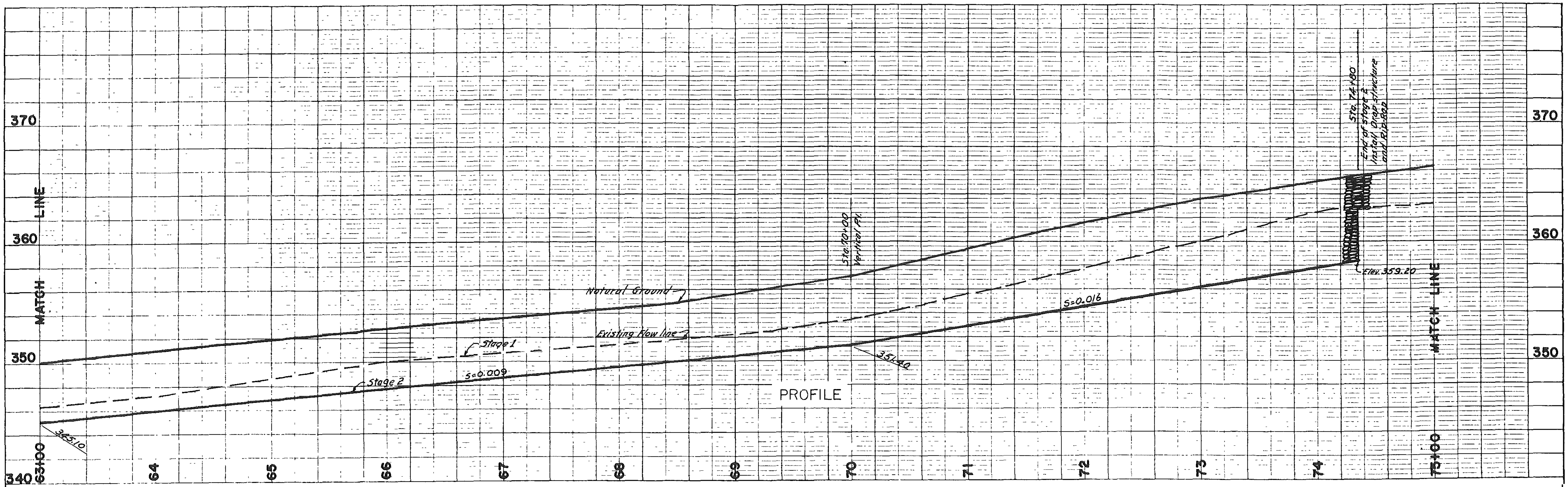
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

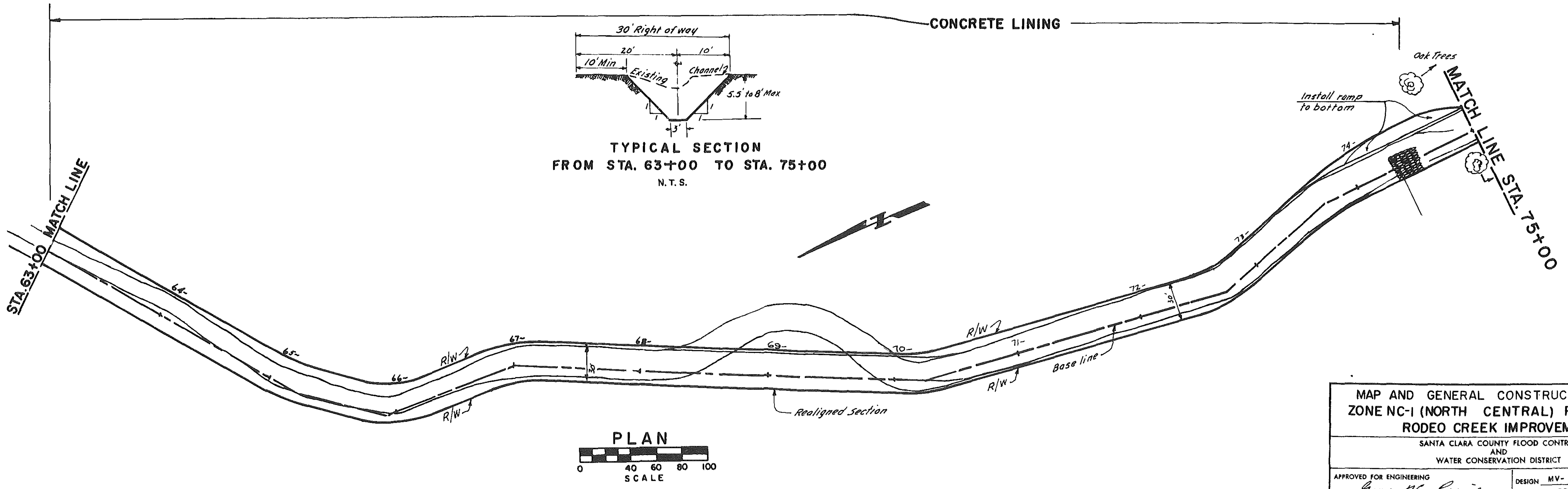
GEORGE H PRIME SUPERVISING ENGINEER

James B. Enochs
JAMES B ENOCHS

MV-EW ACD MEB	AS SHOWN	
	171	9
	230	11
JAN 7, 1961		

PLATE 71





TYPICAL SECTION
FROM STA. 63+00 TO STA. 75+00
N. T. S.

PLAN

JOB NO. 1305

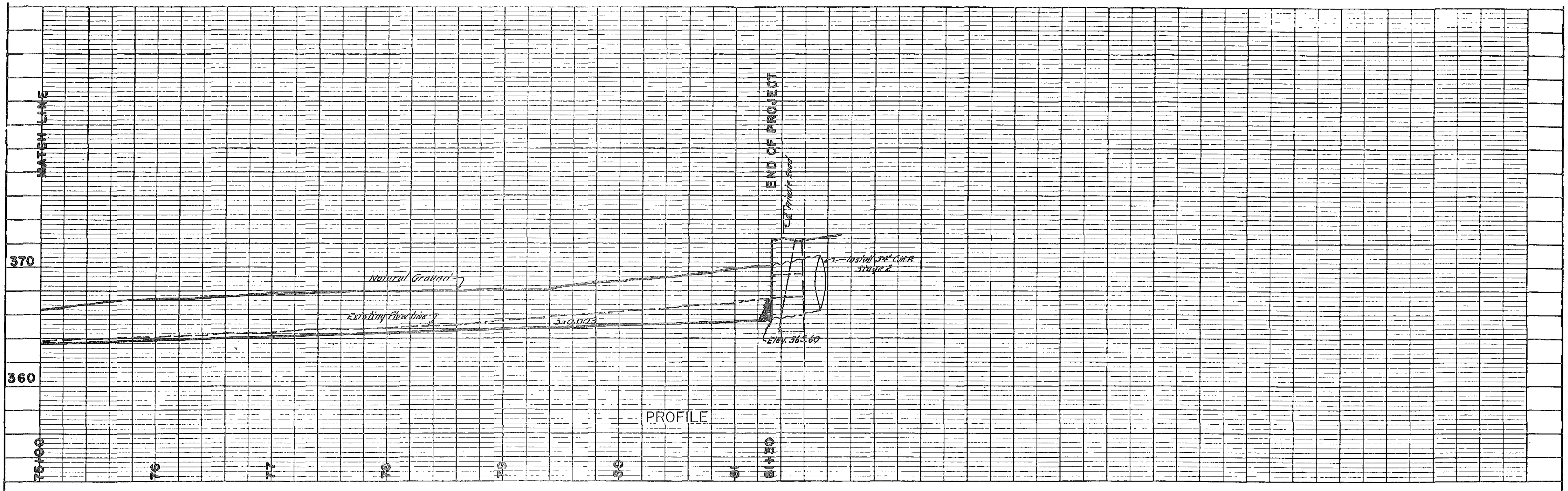
MAP AND GENERAL CONSTRUCION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 15
RODEO CREEK IMPROVEMENT

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

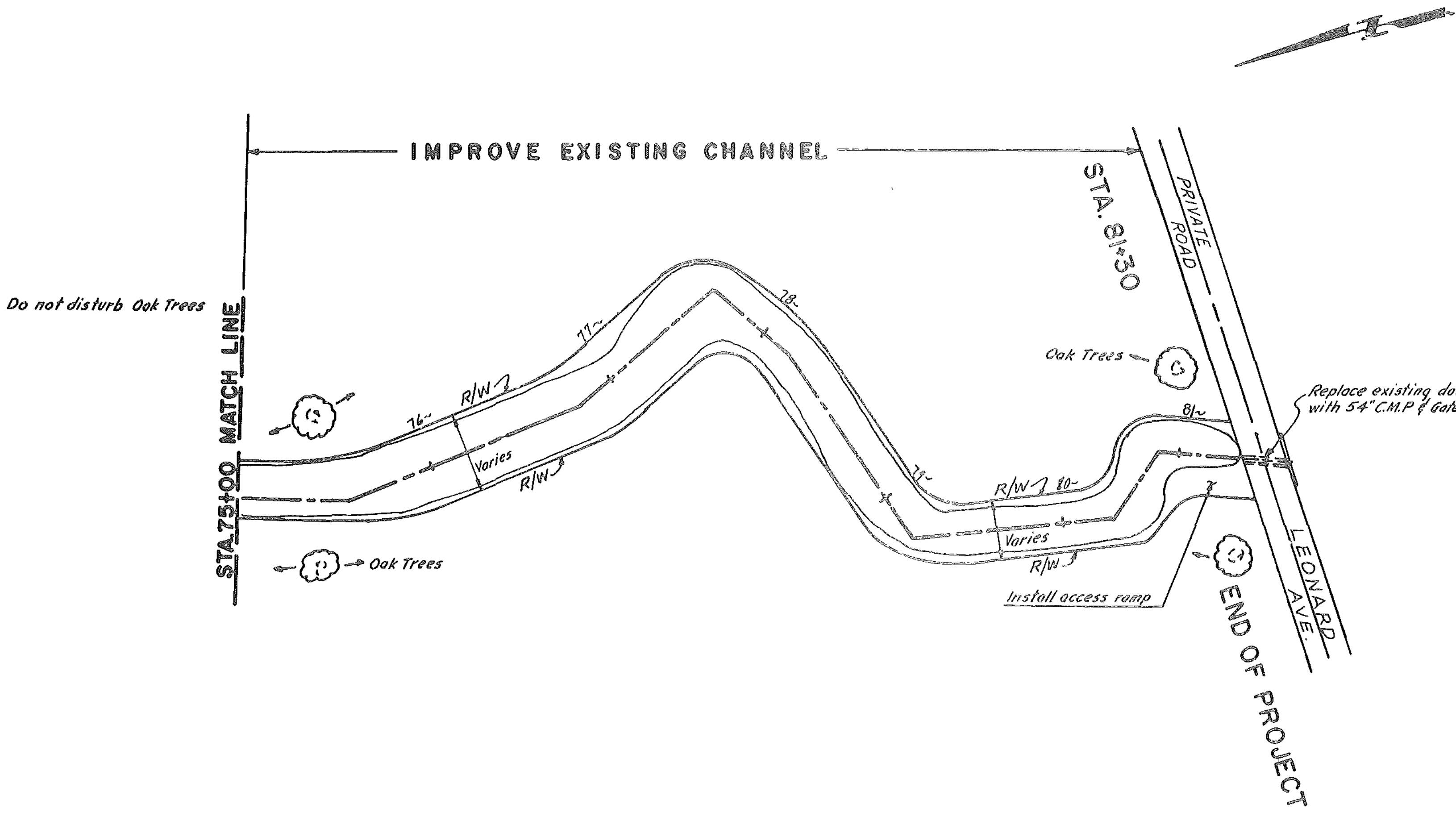
APPROVED FOR ENGINEERING
George H. Prime
GEORGE H. PRIME SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS DIRECTOR

DESIGN MV- EW
DRAWN AD RF NS
CHECKED MEB
DATE JAN 7 1961
SCALE: AS SHOWN
T. B. 171
L. B. 230
SHEET 10 OF 11
FILE NO.

PLATE 72

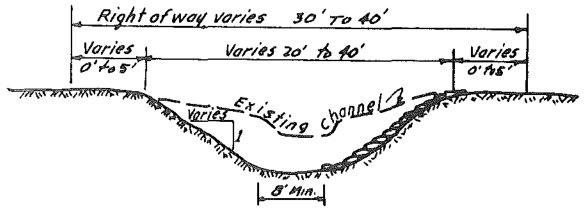


PROFILE



PLAN

0 40 60 80 100
SCALE



TYPICAL SECTION

STA. 74+80 TO STA. 81+90

N. T. S.

NOTE:
All work shown within the proposed R/W limits is for planning purposes; Limited clearing and bank protection in critical areas of existing channel will be done on a maintenance basis.

JOB NO 1305

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 15
RODEO CREEK IMPROVEMENT

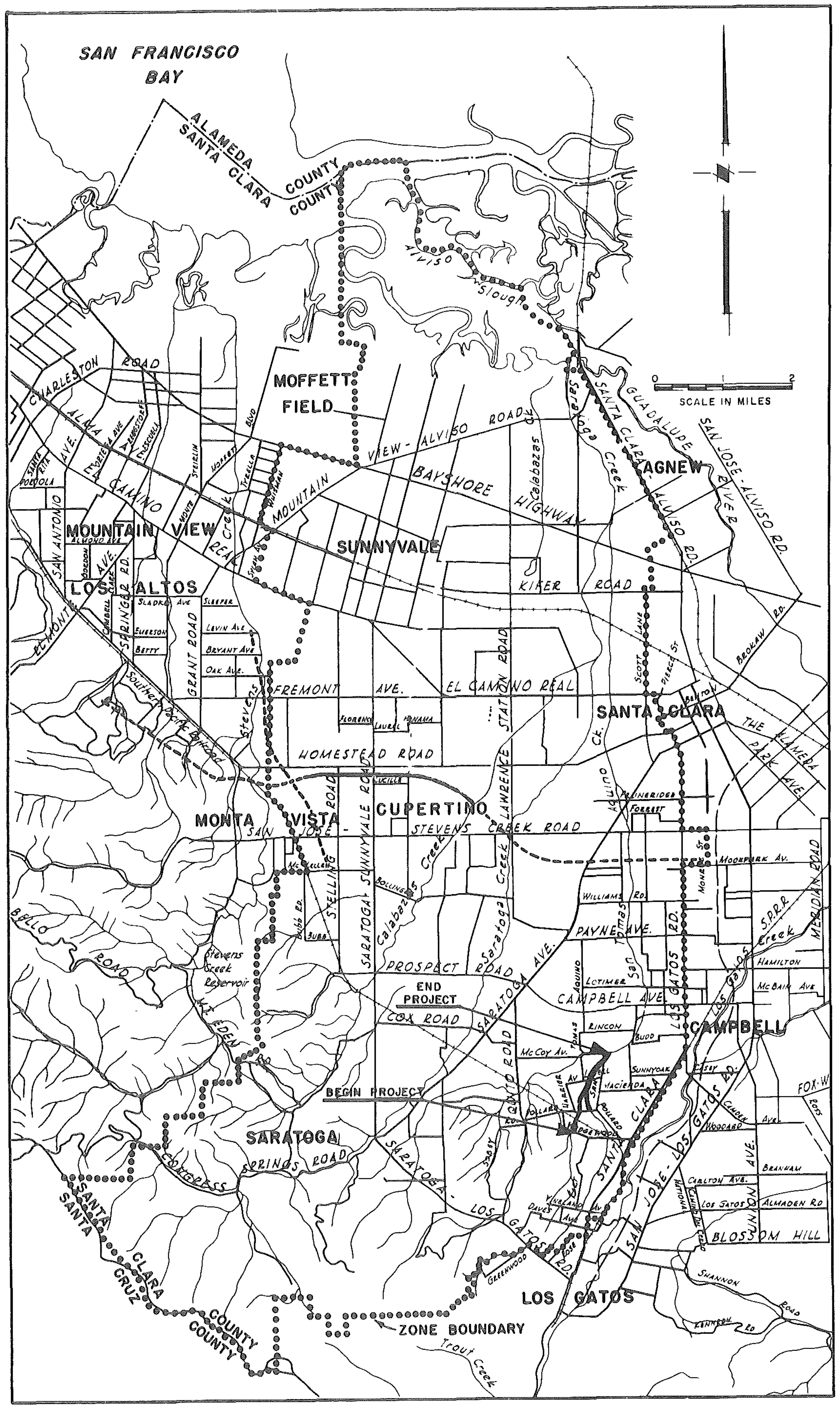
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Prime
GEORGE H PRIME SUPERVISING ENGINEER
APPROVED FOR DEPT OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS DIRECTOR

DESIGN MV.
DRAWN RF·DE·NS·AD
CHECKED MEB
DATE JAN 7 1961

SCALE: AS SHOWN
T. B. 171
L. B. 230
SHEET 11 OF 11
FILE NO.

PLATE 73



MAP AND GENERAL CONSTRUCTION PLANS

OF

ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 16

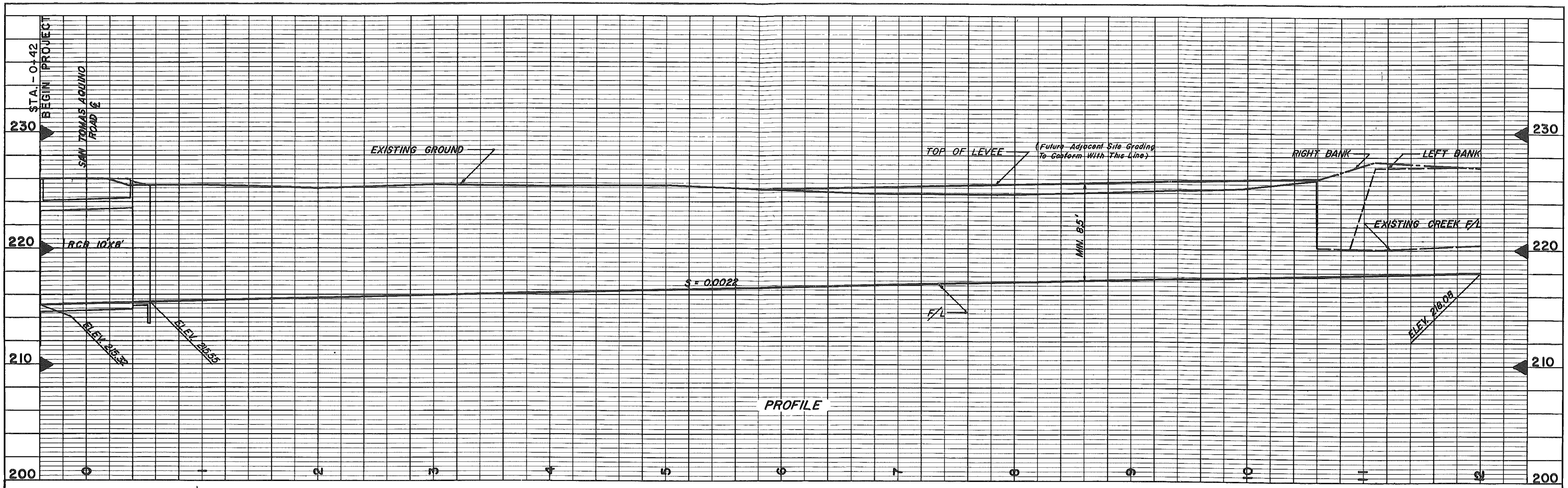
OF

SMITH CREEK IMPROVEMENT

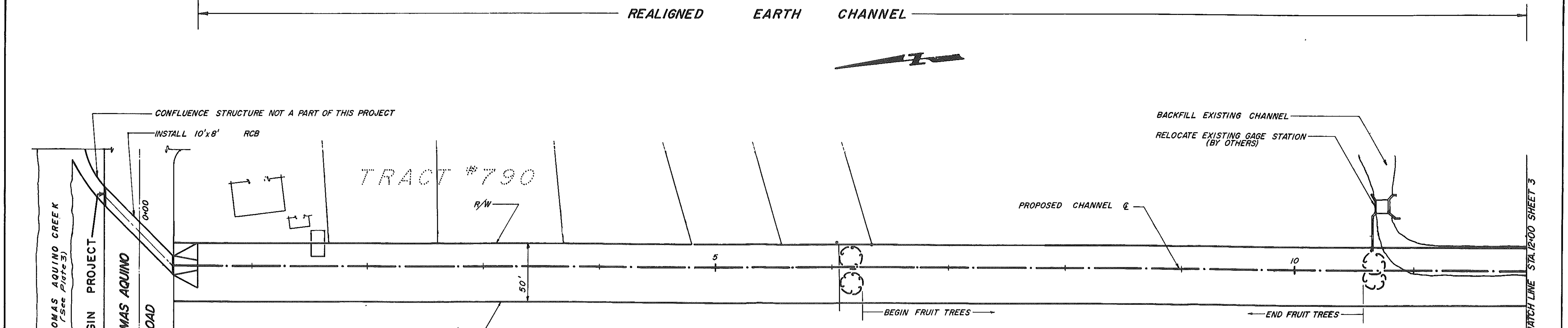
WEDGEWOOD AVE. TO SAN TOMAS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA CLARA COUNTY, CALIFORNIA



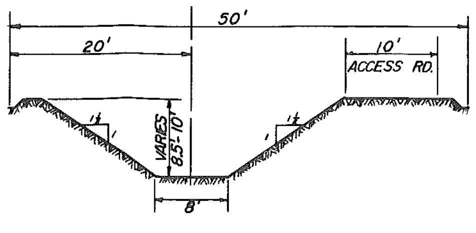
PROFILE


REALIGNED EARTH CHANNEL
N
CONFLUENCE STRUCTURE NOT A PART OF THIS PROJECT
INSTALL 10'x8' RCB
TRACT #790
R/W
SAN TOMAS AQUINO CREEK (See Plate 3)
BEGIN PROJECT
SAN TOMAS AQUINO ROAD
0+00
50'
5
10
BEGIN FRUIT TREES
END FRUIT TREES
PROPOSED CHANNEL ℄
BACKFILL EXISTING CHANNEL
RELOCATE EXISTING GAGE STATION (BY OTHERS)
MATCH LINE STA. 12+00 SHEET 3
R/W
REMOVE EXISTING FRUIT TREES WITHIN RIGHT OF WAY

BASIS OF ELEVATION U.S.G.S. 1954 DATUM BASED ON 1929 S.L.D.

PLAN

0 40 60 80 100
SCALE



TYPICAL SECTION
STA. 0+50 TO STA. 14+00

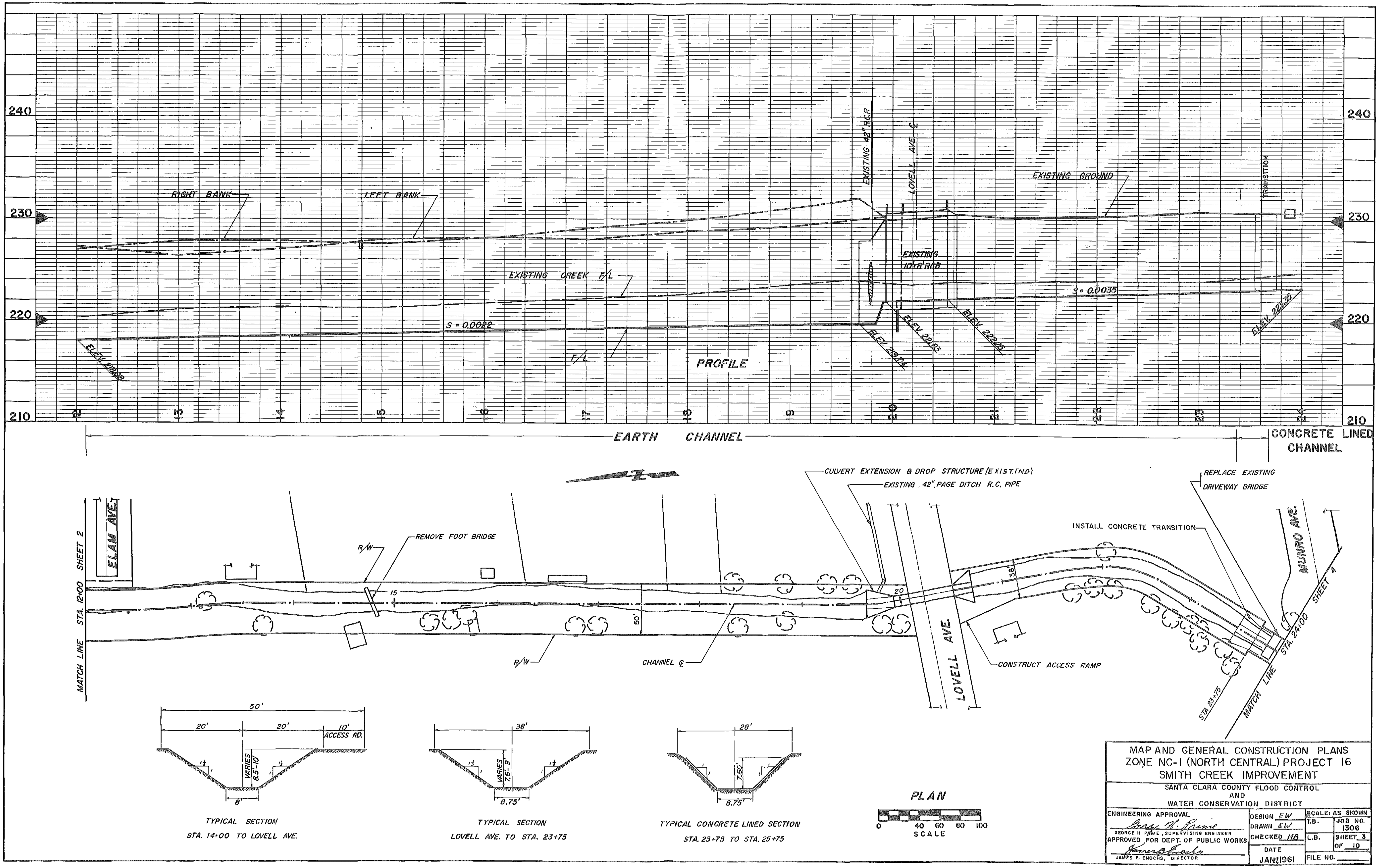
BASIS OF ELEVATIONS:
U.S.G.S. 1954 DATUM
BASED ON 1929 S. L. D.

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 16
SMITH CREEK IMPROVEMENT

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL George H. Prime GEORGE H. PRIME, SUPERVISING ENGINEER	DESIGN E W DRAWN E W CHECKED MB	SCALE: AS SHOWN	
		T.B.	JOB NO. 1306
APPROVED FOR DEPT. OF PUBLIC WORKS James B Enochs JAMES B ENOCHS, DIRECTOR	DATE JAN 7, 1961	L.B.	SHEET 2 OF 10
		FILE NO.	

PLATE 75



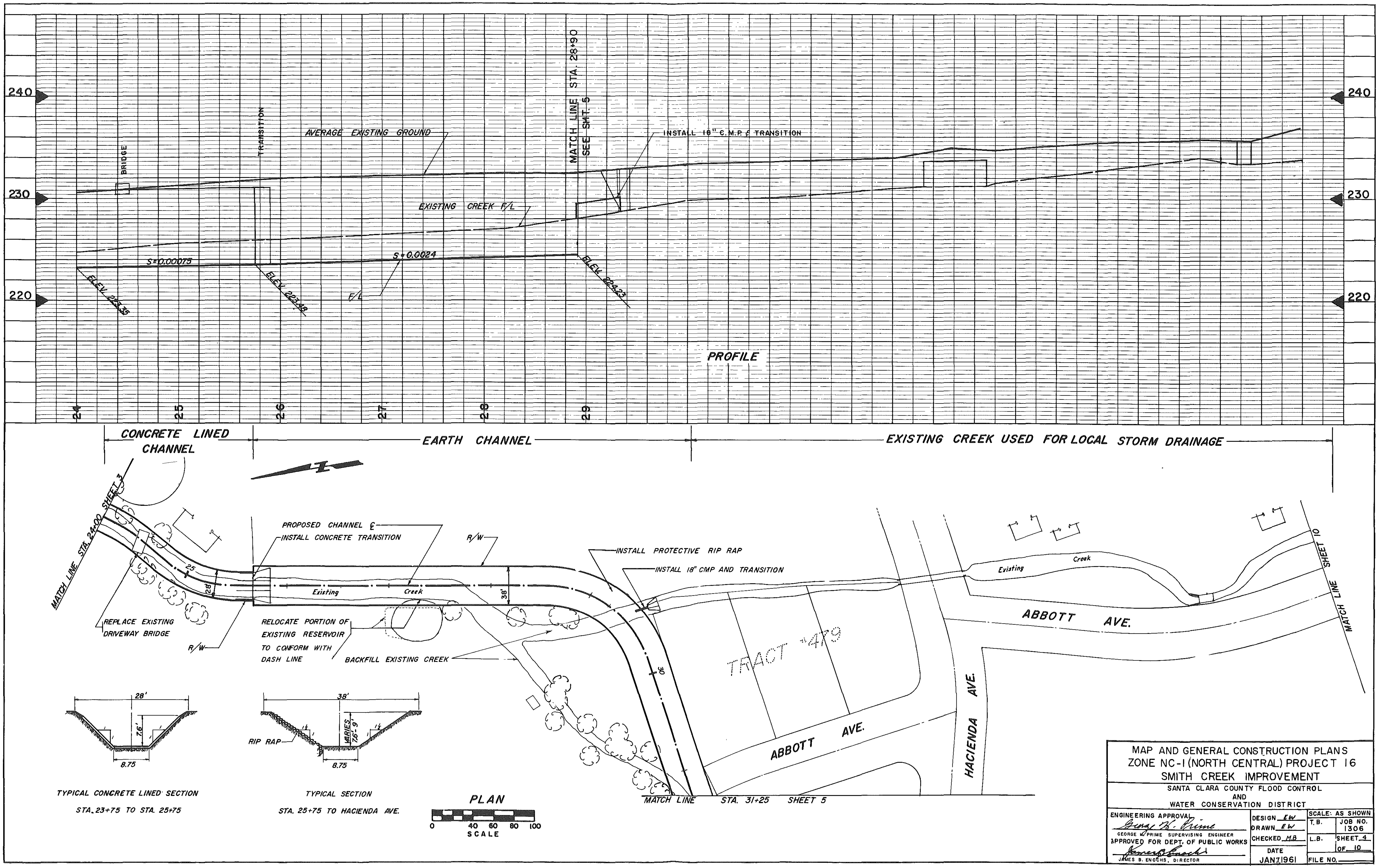
MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-I (NORTH CENTRAL) PROJECT 16
SMITH CREEK IMPROVEMENT

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
George H. Prime
GEORGE H PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS, DIRECTOR

DESIGN EW
DRAWN EW
CHECKED MB
DATE
JAN 7 1961

SCALE: AS SHOWN
T.B.
JOB NO. 1306
L.B.
SHEET 3
OF 10
FILE NO.



MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 16
SMITH CREEK IMPROVEMENT

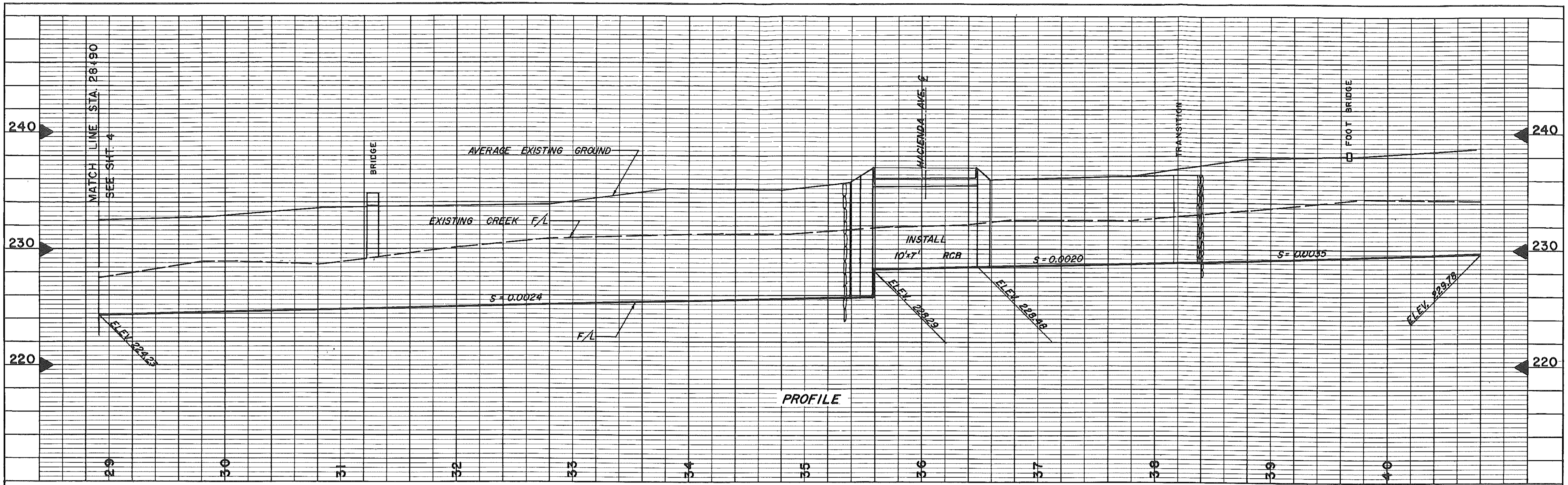
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
George W. Prime
GEORGE W. PRIME SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS, DIRECTOR

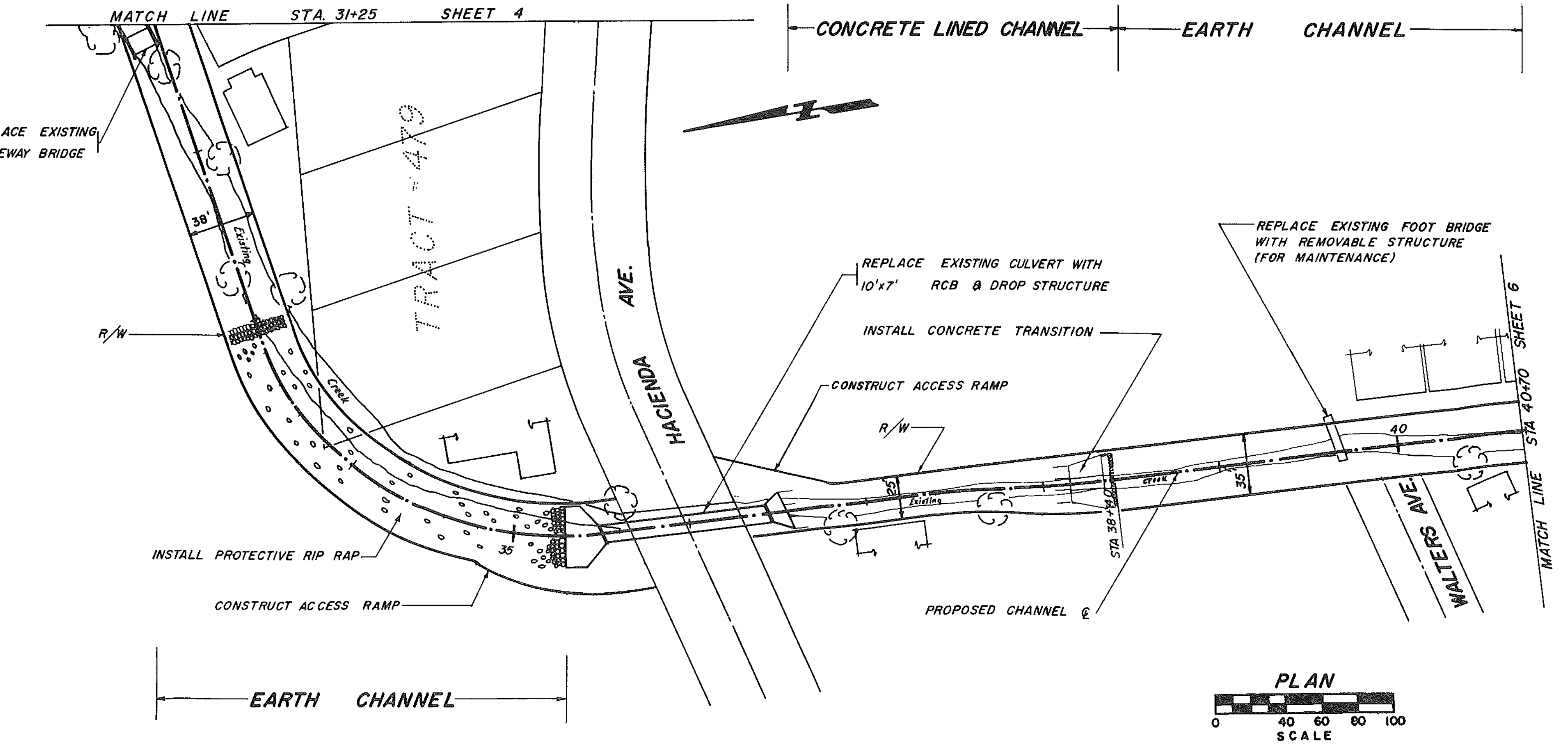
DESIGN EW
DRAWN EW
CHECKED MB
DATE
JAN 7 1961

SCALE: AS SHOWN
T.B.
JOB NO. 1306
L.B.
SHEET 4 OF 10
FILE NO.

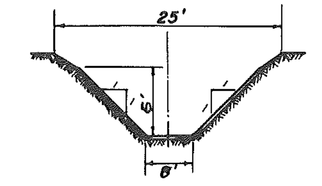
PLATE 77



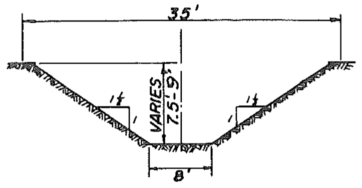
PROFILE


MATCH LINE STA. 31+25 SHEET 4
CONCRETE LINED CHANNEL
EARTH CHANNEL
REPLACE EXISTING DRIVEWAY BRIDGE
TRACT 479
38'
Existing
R/W
Creek
HACIENDA AVE.
35
INSTALL PROTECTIVE RIP RAP
CONSTRUCT ACCESS RAMP
REPLACE EXISTING CULVERT WITH 10'x7' RCB & DROP STRUCTURE
INSTALL CONCRETE TRANSITION
CONSTRUCT ACCESS RAMP
R/W
25
Existing
STA 38+40
Creek
35
40
PROPOSED CHANNEL ℄
REPLACE EXISTING FOOT BRIDGE WITH REMOVABLE STRUCTURE (FOR MAINTENANCE)
WALTERS AVE.
MATCH LINE STA 40+70 SHEET 6
EARTH CHANNEL
0 40 60 80 100
SCALE

PLAN



TYPICAL CONCRETE LINED SECTION
HACIENDA AVE. TO STA. 38+40

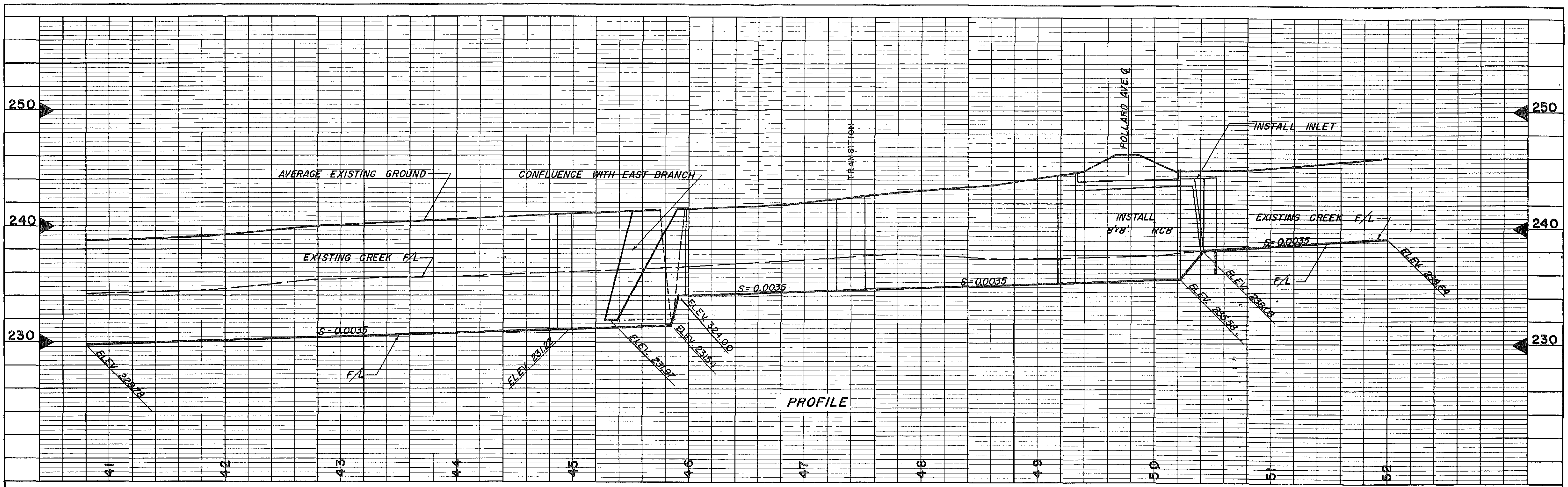


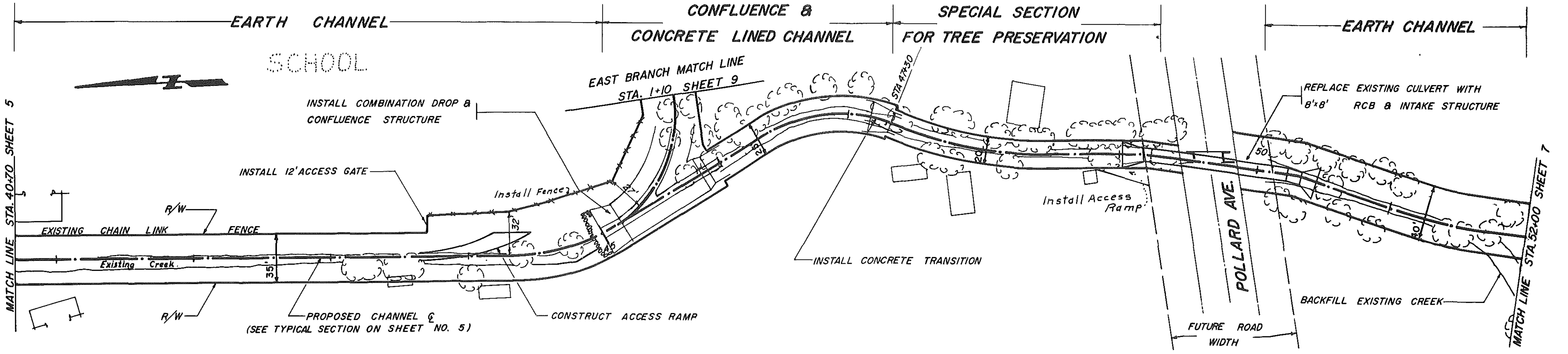
TYPICAL SECTION
STA. 38+40 TO STA. 45+00

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-I (NORTH CENTRAL) PROJECT 16
SMITH CREEK IMPROVEMENT

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

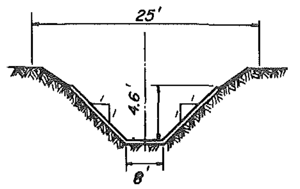
ENGINEERING APPROVAL George H. Prime GEORGE H PRIME, SUPERVISING ENGINEER	DESIGN EW DRAWN EW CHECKED M.B	SCALE: AS SHOWN	
		T.B.	JOB NO. 1306
APPROVED FOR DEPT. OF PUBLIC WORKS James B Enochs JAMES B ENOCHS, DIRECTOR	DATE JAN 1961	L.B.	SHEET 5 OF 10
		FILE NO.	



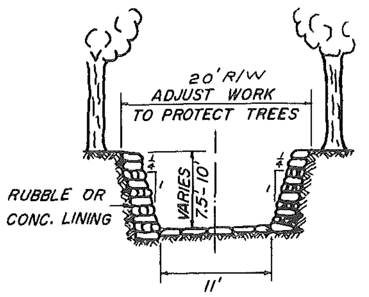

EARTH CHANNEL
CONFLUENCE & CONCRETE LINED CHANNEL
SPECIAL SECTION FOR TREE PRESERVATION
EARTH CHANNEL
SCHOOL
N
EAST BRANCH MATCH LINE STA. 1+10 SHEET 9
INSTALL COMBINATION DROP & CONFLUENCE STRUCTURE
INSTALL 12' ACCESS GATE
Install Fence
R/W
EXISTING CHAIN LINK FENCE
Existing Creek
35'
32'
27'
25'
20'
30'
STA. 47+30
50
MATCH LINE STA. 40+70 SHEET 5
R/W
PROPOSED CHANNEL ℄ (SEE TYPICAL SECTION ON SHEET NO. 5)
CONSTRUCT ACCESS RAMP
INSTALL CONCRETE TRANSITION
Install Access Ramp
REPLACE EXISTING CULVERT WITH 8'x8' RCB & INTAKE STRUCTURE
POLLARD AVE.
FUTURE ROAD WIDTH
BACKFILL EXISTING CREEK
MATCH LINE STA. 52+00 SHEET 7

PLAN

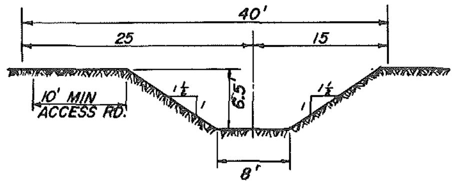
0 40 60 80 100
SCALE



TYPICAL CONCRETE LINED SECTION
STA. 45+00 TO STA. 47+30



TYPICAL SECTION
STA. 47+30 TO POLLARD AVE.



TYPICAL MINIMUM SECTION
POLLARD AVE. TO FUTURE' FWY.

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1(NORTH CENTRAL) PROJECT 16
SMITH CREEK IMPROVEMENT

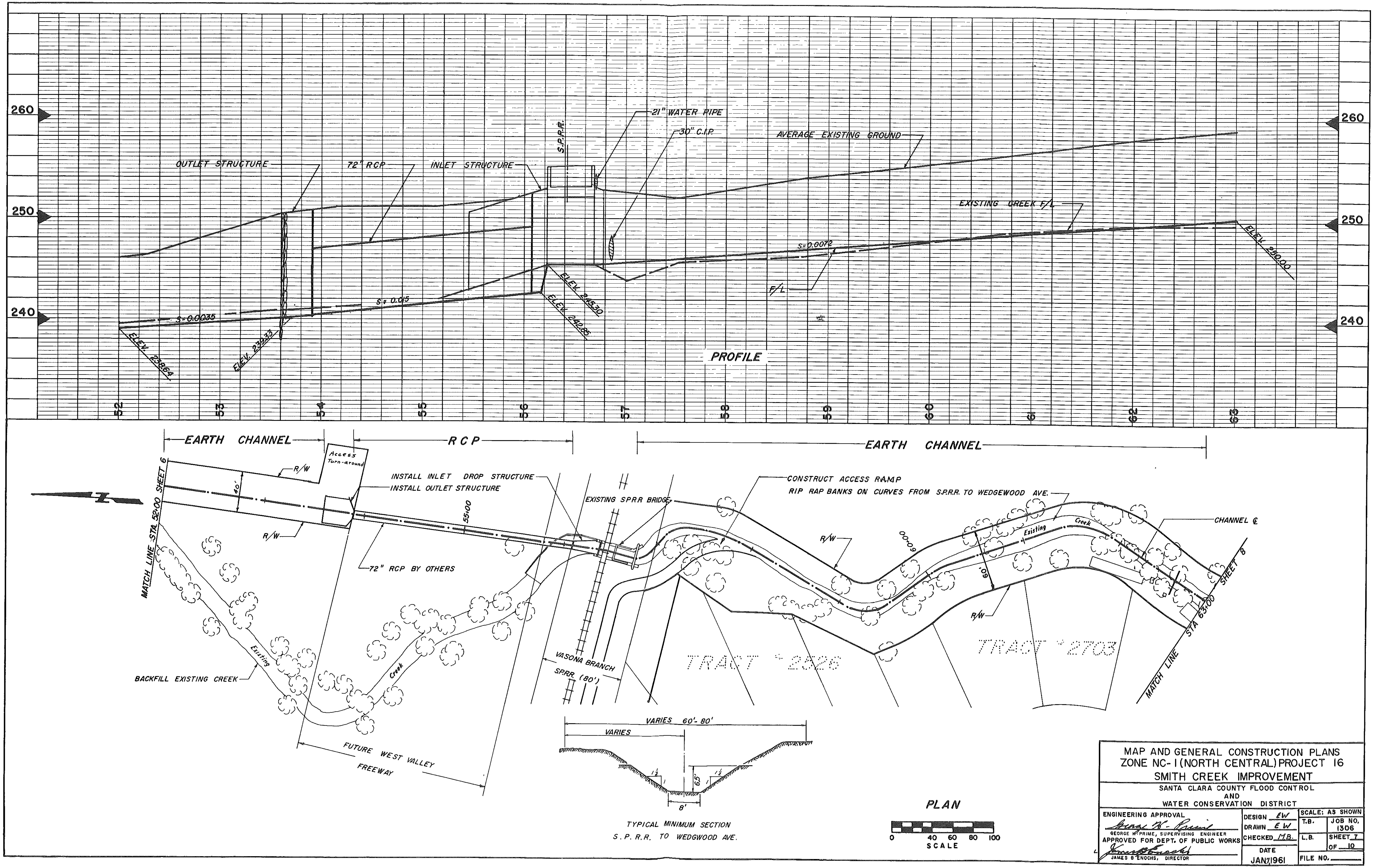
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS, DIRECTOR

DESIGN EW
DRAWN EW
CHECKED MB
DATE JAN.7,1961

SCALE: AS SHOWN
T.B.
JOB NO. 1306
L.B.
SHEET 6 OF 10
FILE NO.

PLATE 79



MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 16
SMITH CREEK IMPROVEMENT

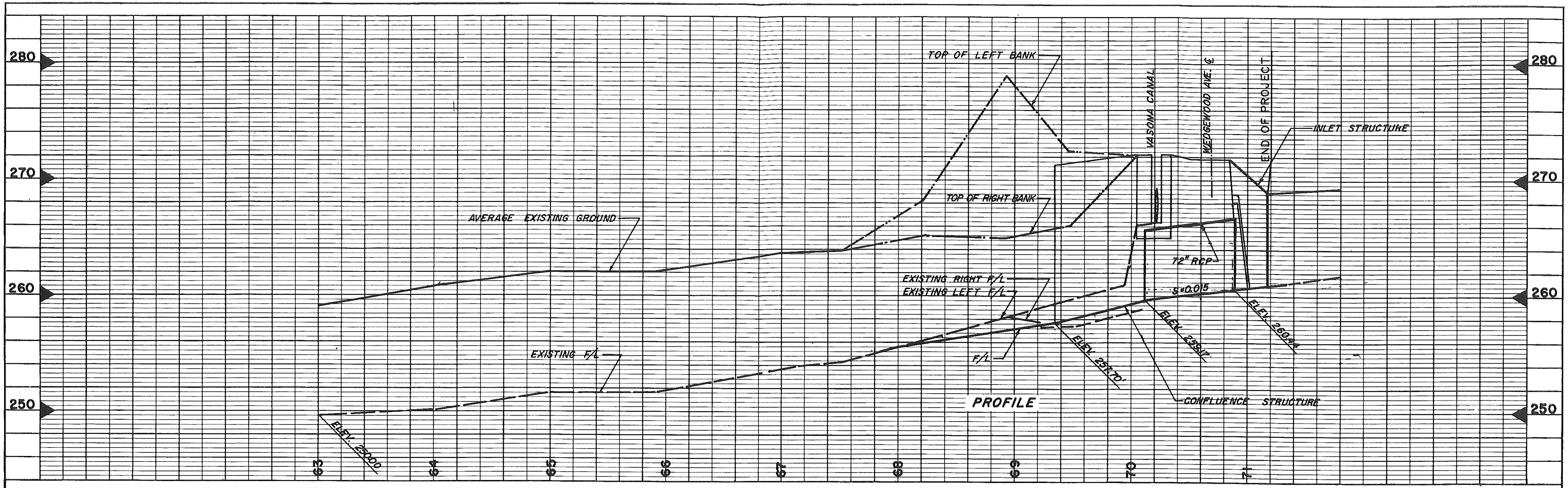
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
George W. Prime
GEORGE W. PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B Enochs
JAMES B ENOCHS, DIRECTOR

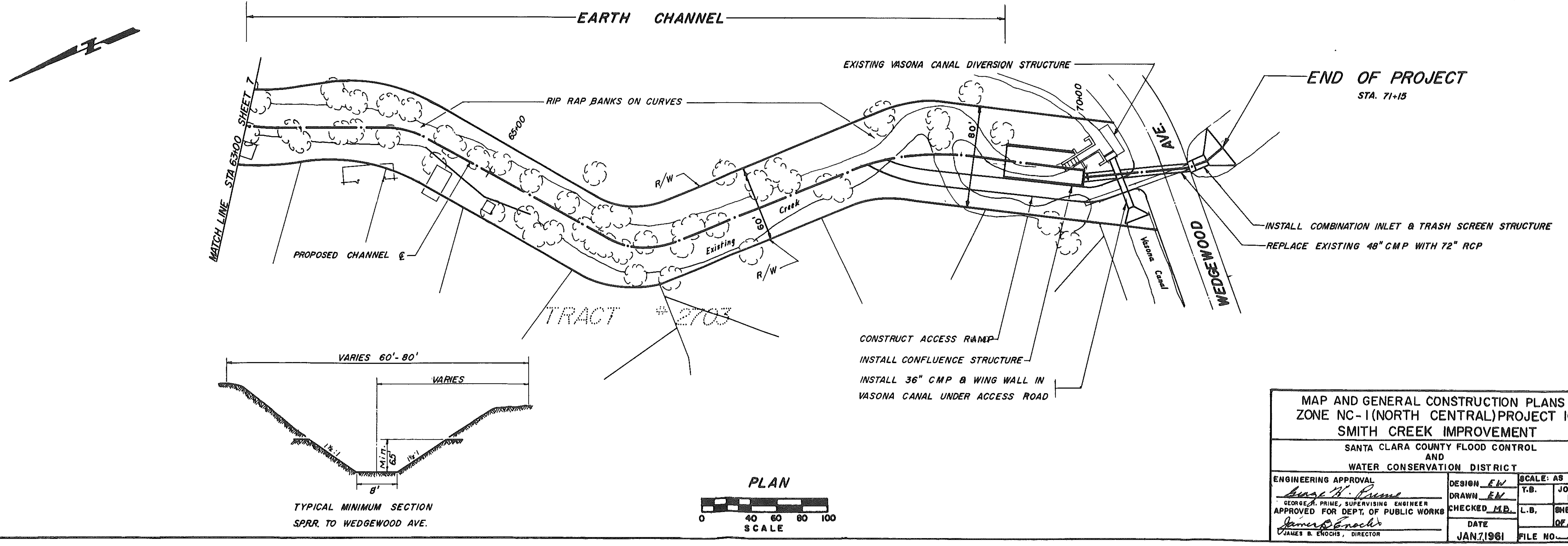
DESIGN EW
DRAWN EW
CHECKED MB.
DATE
JAN 7 1961

SCALE: AS SHOWN
T.B.
JOB NO. 1306
L.B.
SHEET 7
OF 10
FILE NO.

PLATE 80



PROFILE


EARTH CHANNEL
EXISTING VASONA CANAL DIVERSION STRUCTURE
END OF PROJECT
STA. 71+15
RIP RAP BANKS ON CURVES
MATCH LINE STA 63+00 SHEET 7
65+00
R/W
80'
70+00
AVE.
60'
Existing
Creek
R/W
WEDGEWOOD
Vasona
Canal
INSTALL COMBINATION INLET & TRASH SCREEN STRUCTURE
REPLACE EXISTING 48" CMP WITH 72" RCP
PROPOSED CHANNEL ℄
TRACT # 2703
CONSTRUCT ACCESS RAMP
INSTALL CONFLUENCE STRUCTURE
INSTALL 36" CMP & WING WALL IN
VASONA CANAL UNDER ACCESS ROAD
VARIES 60'-80'
VARIES
1½:1
Min. 6.5'
1½:1
8'
0
40
60
80
100
SCALE

TYPICAL MINIMUM SECTION
SPRR. TO WEDGEWOOD AVE.

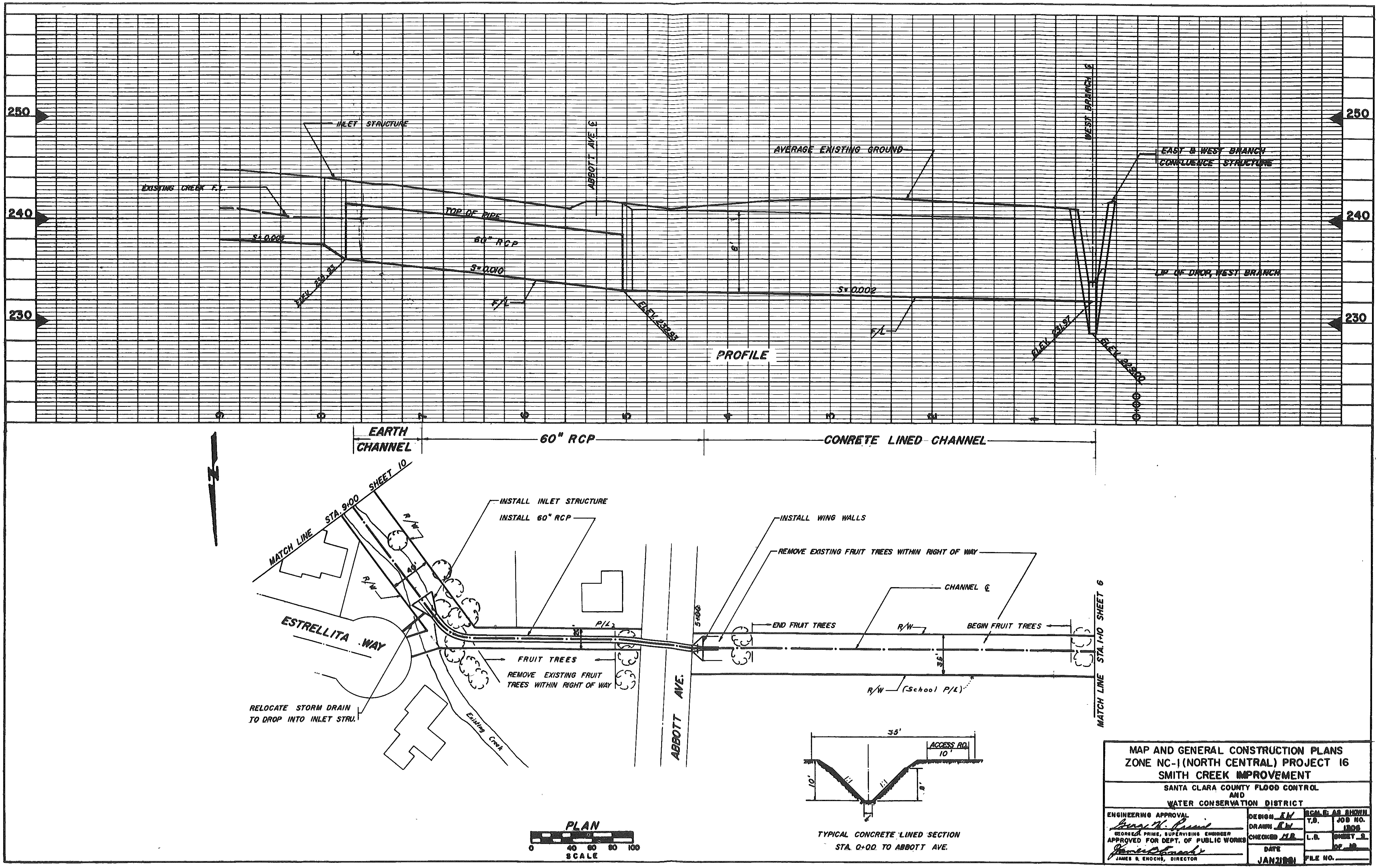
PLAN

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 16
SMITH CREEK IMPROVEMENT

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL George W. Prime GEORGE W. PRIME, SUPERVISING ENGINEER	DESIGN EW DRAWN EW CHECKED M.B.	SCALE: AS SHOWN	
		T.B.	JOB NO. 1306
APPROVED FOR DEPT. OF PUBLIC WORKS James B. Enochs JAMES B. ENOCHS, DIRECTOR	DATE JAN.7,1961	L.B.	SHEET 8 OF 10
		FILE NO.	

PLATE 81



MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 16
SMITH CREEK IMPROVEMENT

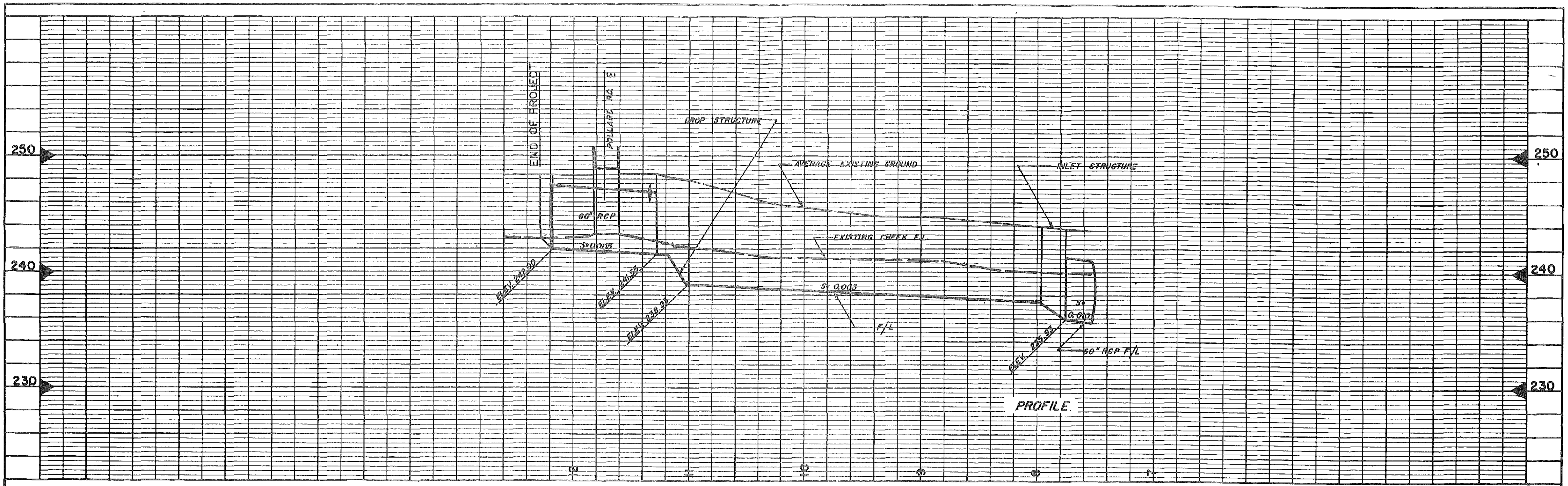
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS, DIRECTOR

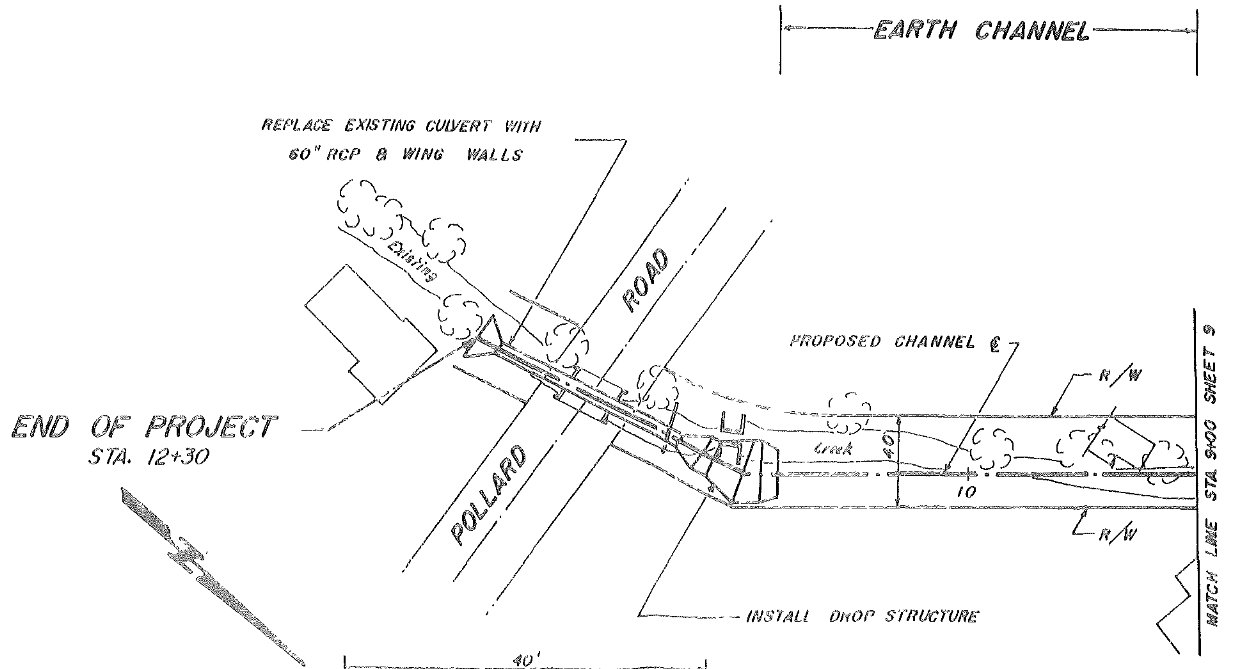
DESIGN EW
DRAWN EW
CHECKED MB
DATE
JAN 1961

SCALE: AS SHOWN
T.B.
JOB NO. 1206
L.B.
SHEET 2 OF 10
FILE NO.

PLATE 82

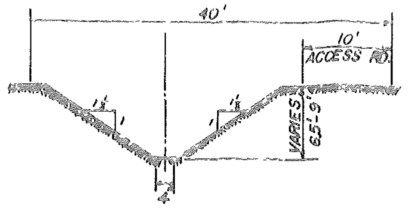


PROFILE



PLAN

40 60 80 100
SCALE



TYPICAL SECTION
STA. 7+05 TO STA. 10+85

JOB NO.

MAP AND GENERAL CONSTRUCTION PLANS
ZONE NC-1 (NORTH CENTRAL) PROJECT 16
SMITH CREEK IMPROVEMENT

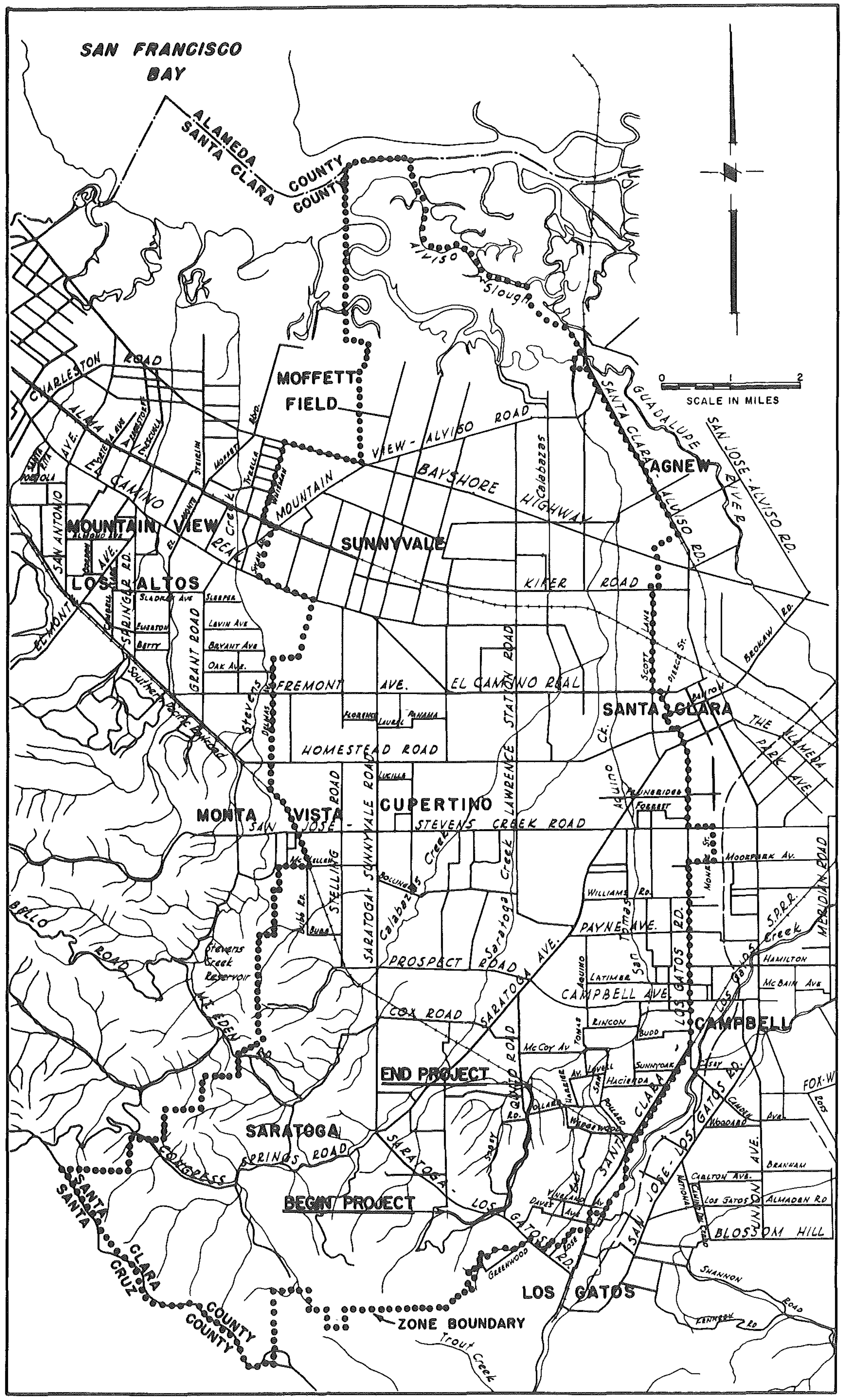
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS DIRECTOR

DESIGN EW
DRAWN EW
CHECKED N.B.
DATE
JAN21961

SCALE
T. B.
L. B.
SHEET 10 OF 10
FB NO.

PLATE 83



MAP AND GENERAL CONSTRUCTION PLANS

OF

ZONE NC-I (NORTH CENTRAL) PROJECT NO. 20

SAN TOMAS AQUINO CREEK IMPROVEMENT

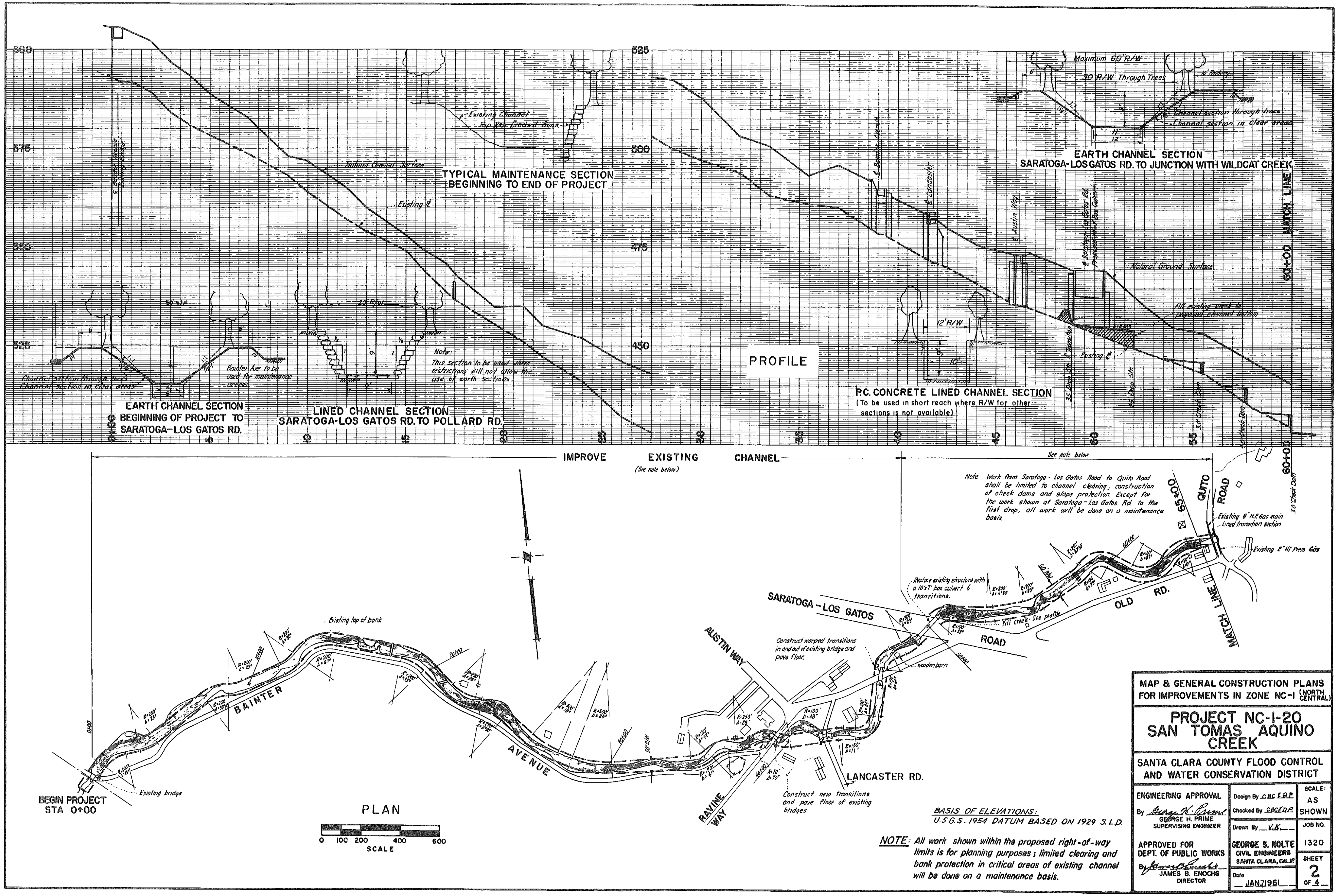
FROM

BAINTER AVE TO WILDCAT CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA CLARA COUNTY, CALIFORNIA

PLATE 84



Note Work from Saratoga - Los Gatos Road to Quito Road shall be limited to channel clearing, construction of check dams and slope protection. Except for the work shown at Saratoga - Los Gatos Rd. to the first drop, all work will be done on a maintenance basis.

BASIS OF ELEVATIONS:
U.S.G.S. 1954 DATUM BASED ON 1929 S.L.D.

NOTE: All work shown within the proposed right-of-way limits is for planning purposes; limited clearing and bank protection in critical areas of existing channel will be done on a maintenance basis.

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-20
SAN TOMAS AQUINO CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
By George H. Prime
GEORGE H. PRIME
SUPERVISING ENGINEER

APPROVED FOR
DEPT. OF PUBLIC WORKS
By James B. Enochs
JAMES B. ENOCHS
DIRECTOR

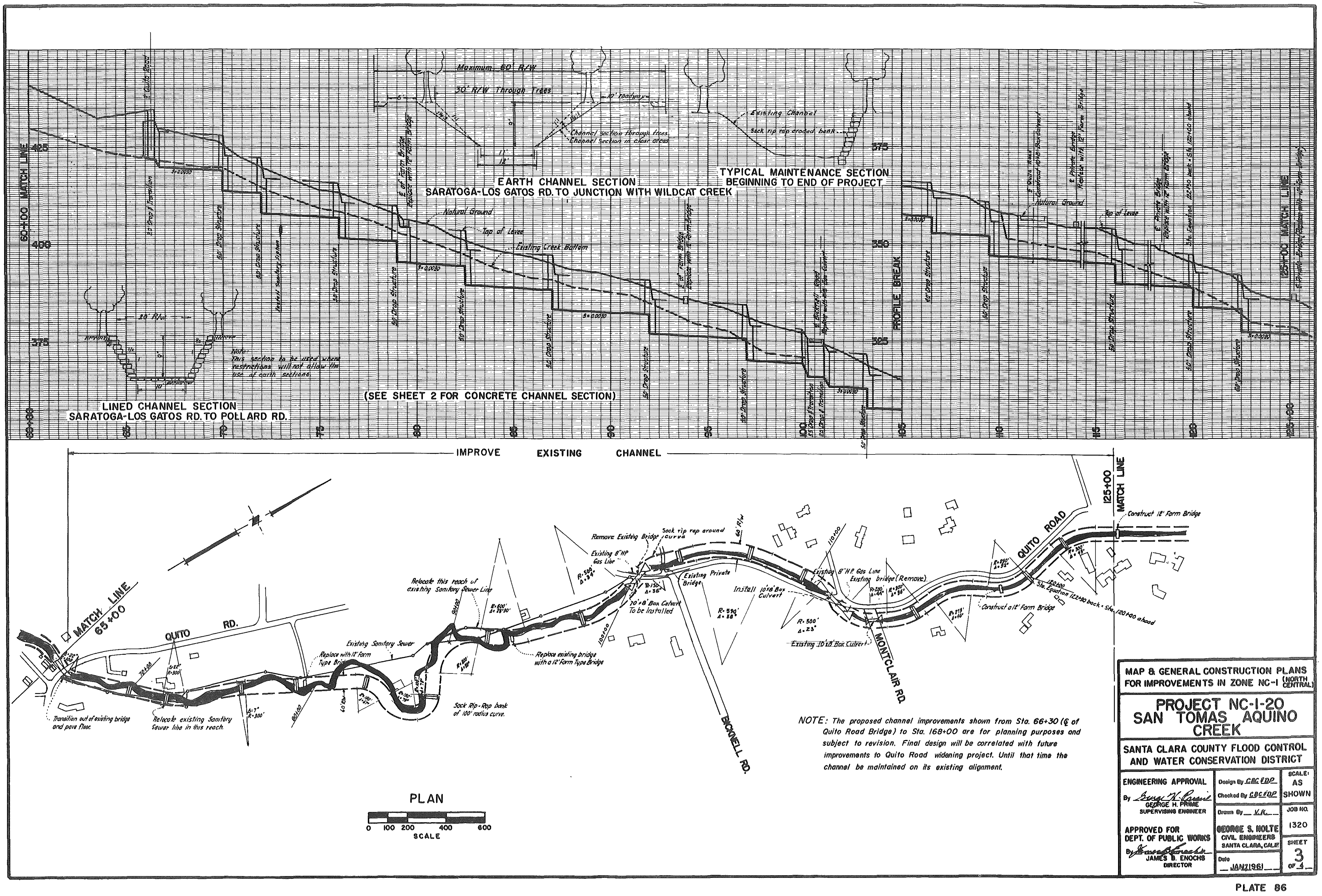
Design By CBC EDP
Checked By CBC EDP
Drawn By V.K.

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.

Date JAN 7 1961

SCALE: AS SHOWN
JOB NO. 1320
SHEET 2 OF 4

PLATE 85



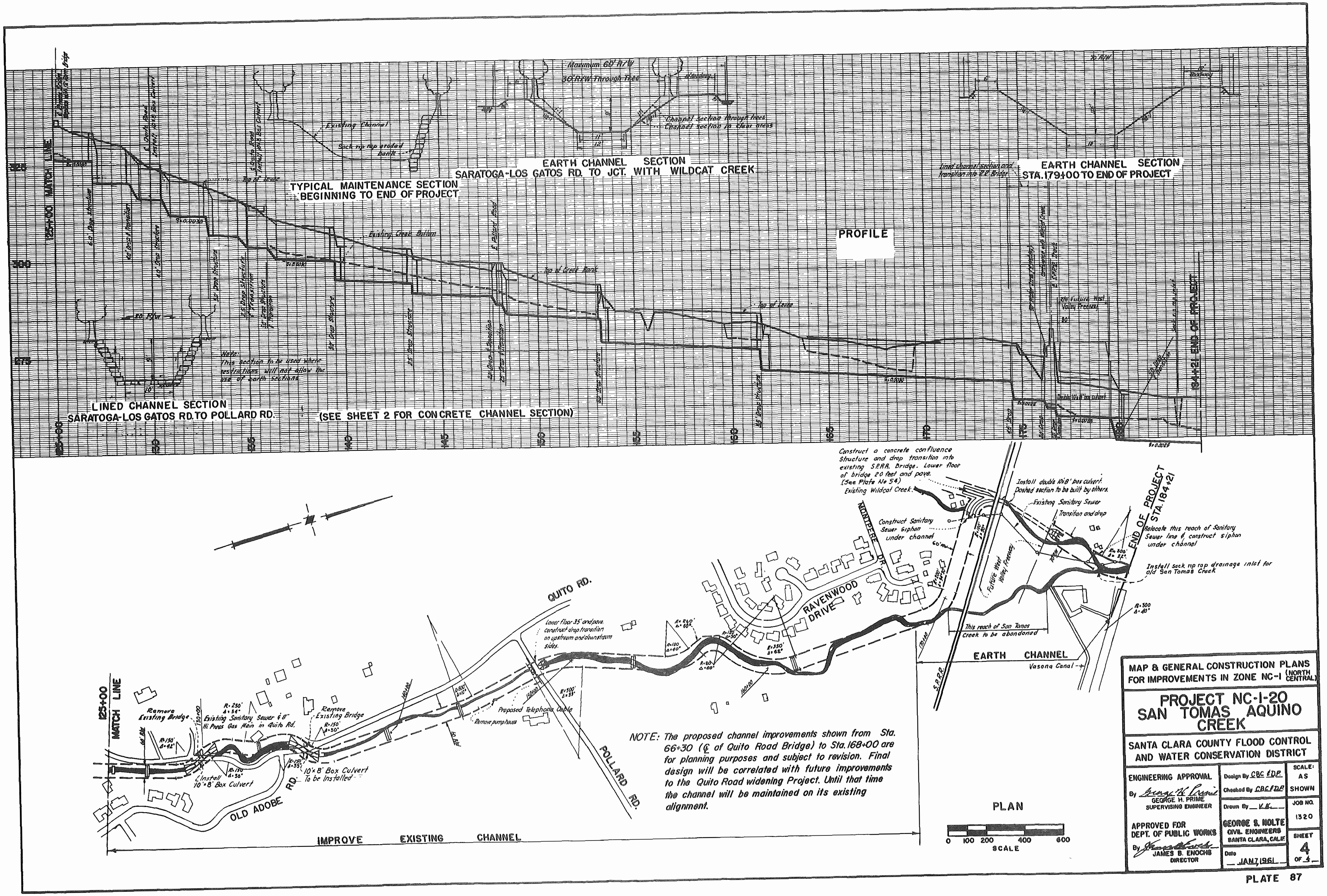
NOTE: The proposed channel improvements shown from Sta. 66+30 (℄ of Quito Road Bridge) to Sta. 168+00 are for planning purposes and subject to revision. Final design will be correlated with future improvements to Quito Road widening project. Until that time the channel be maintained on its existing alignment.

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-20
SAN TOMAS AQUINO CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL By George H. Prime GEORGE H. PRIME SUPERVISING ENGINEER	Design By CBC EDP Checked By CBC EDP	SCALE: AS SHOWN
	Drawn By V.K. GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF.	JOB NO. 1320
APPROVED FOR DEPT. OF PUBLIC WORKS By James B. Enochs JAMES B. ENOCHS DIRECTOR	Date JAN 1961	SHEET 3 OF 4


Maximum 60' R/W
30' R/W Through Trees
Existing Channel
Sack rip rap eroded bank
Channel section through trees
Channel section in clear areas
Top of Levee
EARTH CHANNEL SECTION
SARATOGA-LOS GATOS RD. TO JCT. WITH WILDCAT CREEK
TYPICAL MAINTENANCE SECTION
BEGINNING TO END OF PROJECT
EARTH CHANNEL SECTION
STA. 179+00 TO END OF PROJECT
Lined channel section and transition into S.P. Bridge
PROFILE
Existing Creek Bottom
Top of Creek Bank
Top of Levee
125+00 MATCH LINE
325
300
275
80' R/W
Note:
This section to be used where restrictions will not allow the use of earth sections.
LINED CHANNEL SECTION
SARATOGA-LOS GATOS RD. TO POLLARD RD.
(SEE SHEET 2 FOR CONCRETE CHANNEL SECTION)
Drop Structure
Future West Valley Freeway
Double 10'x8' box culvert
S=0.0025
184+21 END OF PROJECT
125+00
130
135
140
145
150
155
160
165
170
175
QUITO RD.
125+00 MATCH LINE
Remove Existing Bridge
130+00
R=150' Δ=42°
R=250' Δ=34°
Existing Sanitary Sewer & 8" Hi Press Gas Main in Quito Rd.
Install 10'×8' Box Culvert
R=150 Δ=50°
Remove Existing Bridge
R=150' Δ=50°
R=150 Δ=55°
10'×8' Box Culvert To be Installed
OLD ADOBE RD.
140+00
R=500' Δ=10°
Remove pumphouse
Proposed Telephone Cable
150+00
R=500' Δ=33°
Lower floor 35' and pave, construct drop transition on upstream and downstream sides.
POLLARD RD.
R=260' Δ=60°
R=100 Δ=40°
R=80 Δ=60°
R=150 Δ=30°
R=350 Δ=65°
160+00
RAVENWOOD DRIVE
MONTPERE DR.
Construct a concrete confluence Structure and drop transition into existing S.P.R.R. Bridge. Lower floor of bridge 20 feet and pave. (See Plate No 54)
Existing Wildcat Creek
Construct Sanitary Sewer Siphon under channel
60' R/W
R=200' Δ=34°30'
R=100' Δ=30°
Install double 10'x8' box culvert. Dashed section to be built by others.
Existing Sanitary Sewer
Transition and drop
Future West Valley Freeway
END OF PROJECT STA. 184+21
Relocate this reach of Sanitary Sewer line & construct siphon under channel
R=300' Δ=22°
Install sack rip rap drainage inlet for old San Tomas Creek
170+00
This reach of San Tomas Creek to be abandoned
R=300 Δ=40°
EARTH CHANNEL
Vasona Canal
S.P.R.R.
IMPROVE EXISTING CHANNEL
PLAN
0 100 200 400 600
SCALE

NOTE: The proposed channel improvements shown from Sta. 66+30 (℄ of Quito Road Bridge) to Sta. 168+00 are for planning purposes and subject to revision. Final design will be correlated with future improvements to the Quito Road widening Project. Until that time the channel will be maintained on its existing alignment.

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

PROJECT NC-1-20
SAN TOMAS AQUINO CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
By George H. Prime
GEORGE H. PRIME
SUPERVISING ENGINEER

APPROVED FOR
DEPT. OF PUBLIC WORKS
By
JAMES B. ENOCHS
DIRECTOR

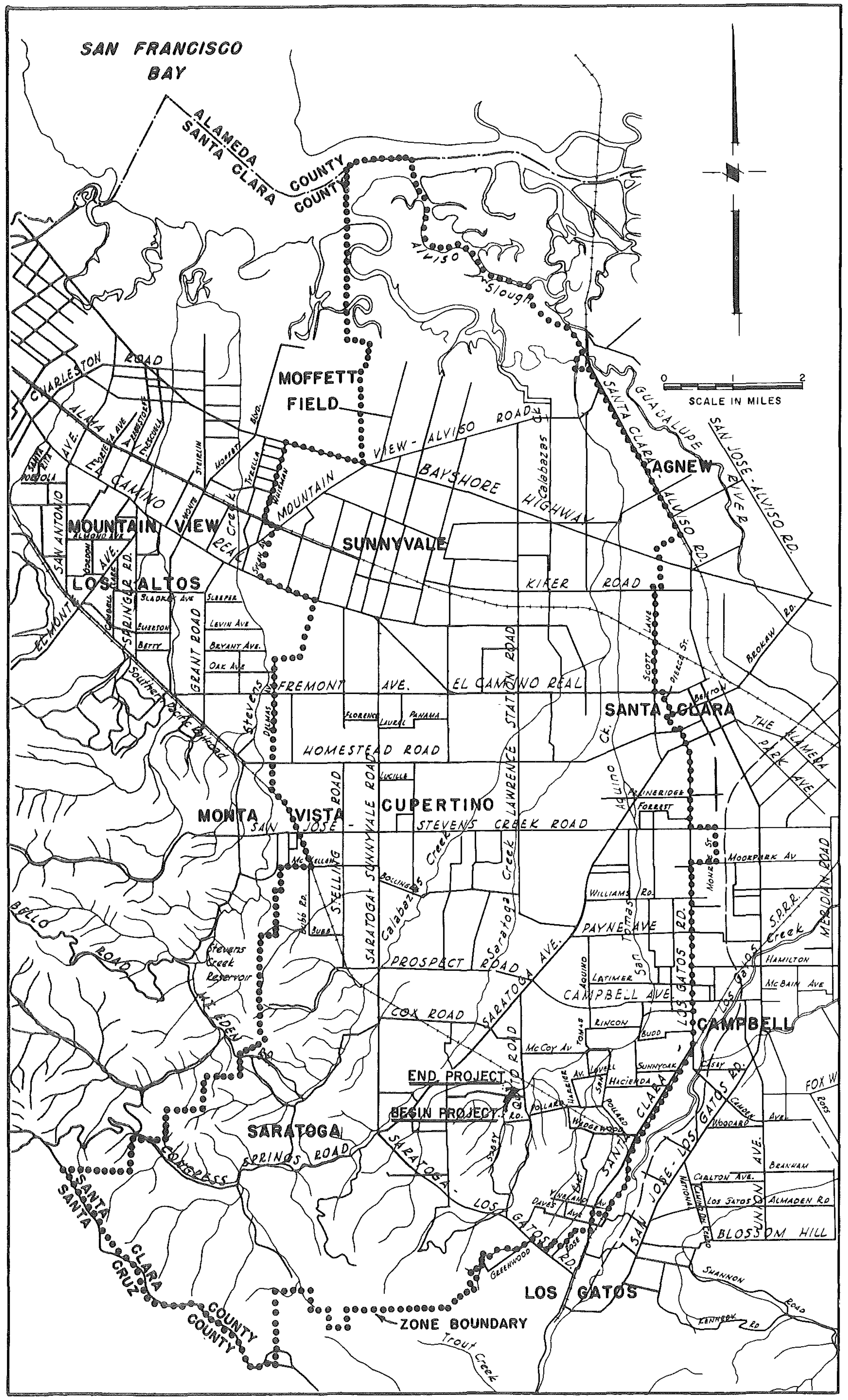
Design By CBC &DP.
Checked By CBC &DP
Drawn By V.K.

GEORGE S. NOLTE
CIVIL ENGINEERS
SANTA CLARA, CALIF.

Date JAN 7, 1961

SCALE: AS SHOWN
JOB NO. 1320
SHEET 4 OF 4

PLATE 87



MAP AND GENERAL CONSTRUCTION PLANS

OF

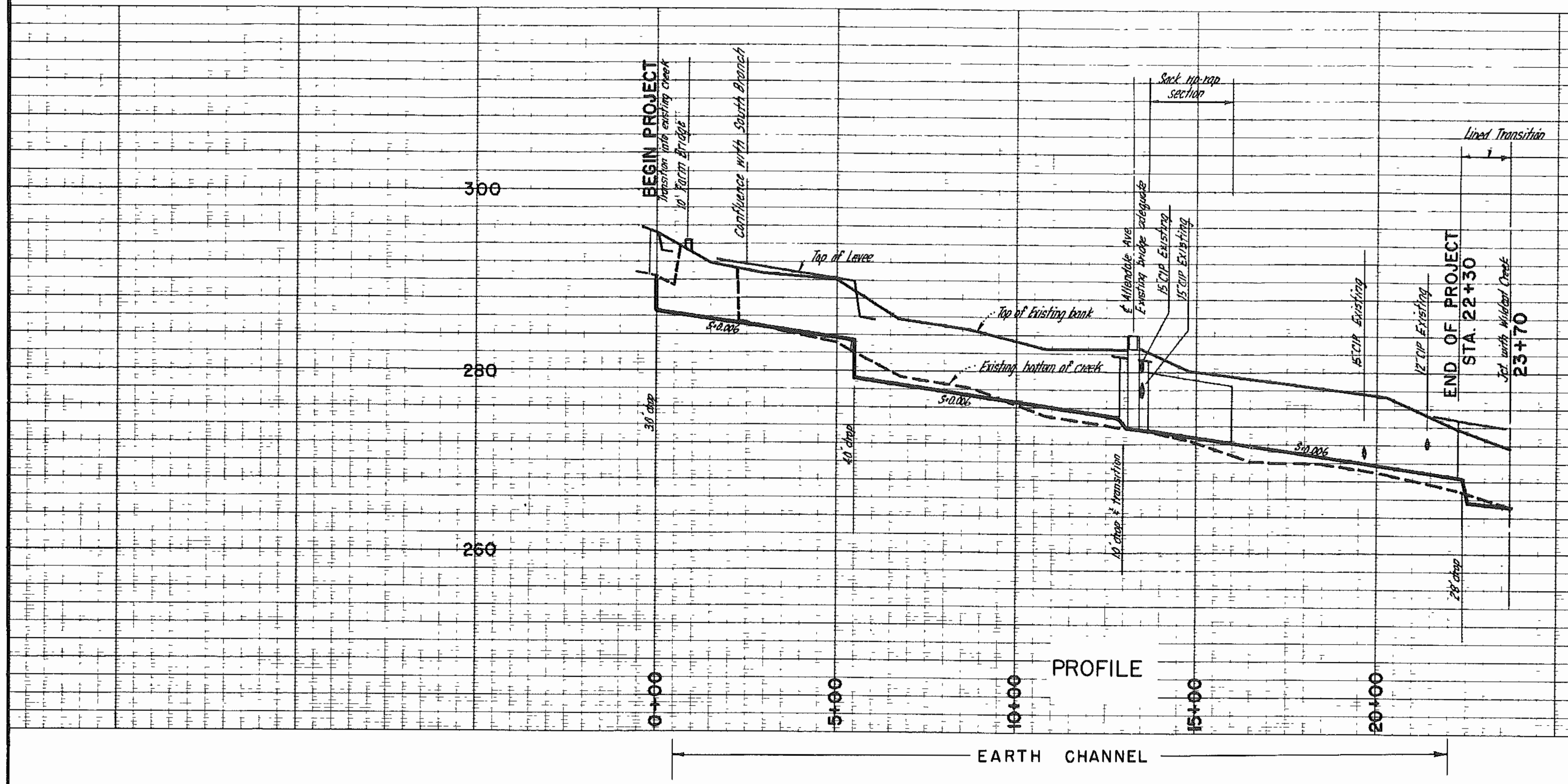
ZONE NC-1 (NORTH CENTRAL) PROJECT NO. 21

VASONA CREEK

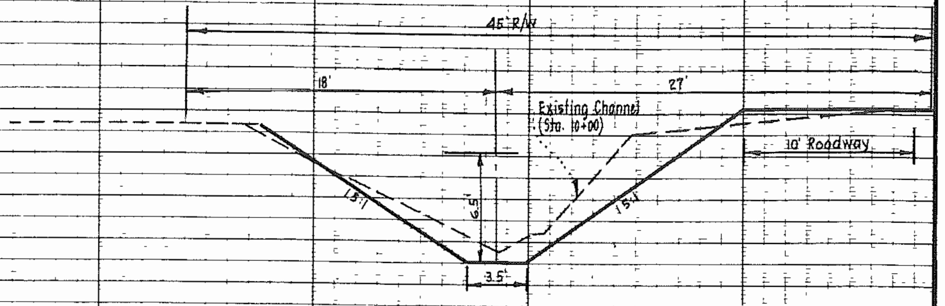
FROM SOUTH BRANCH TO WILDCAT CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

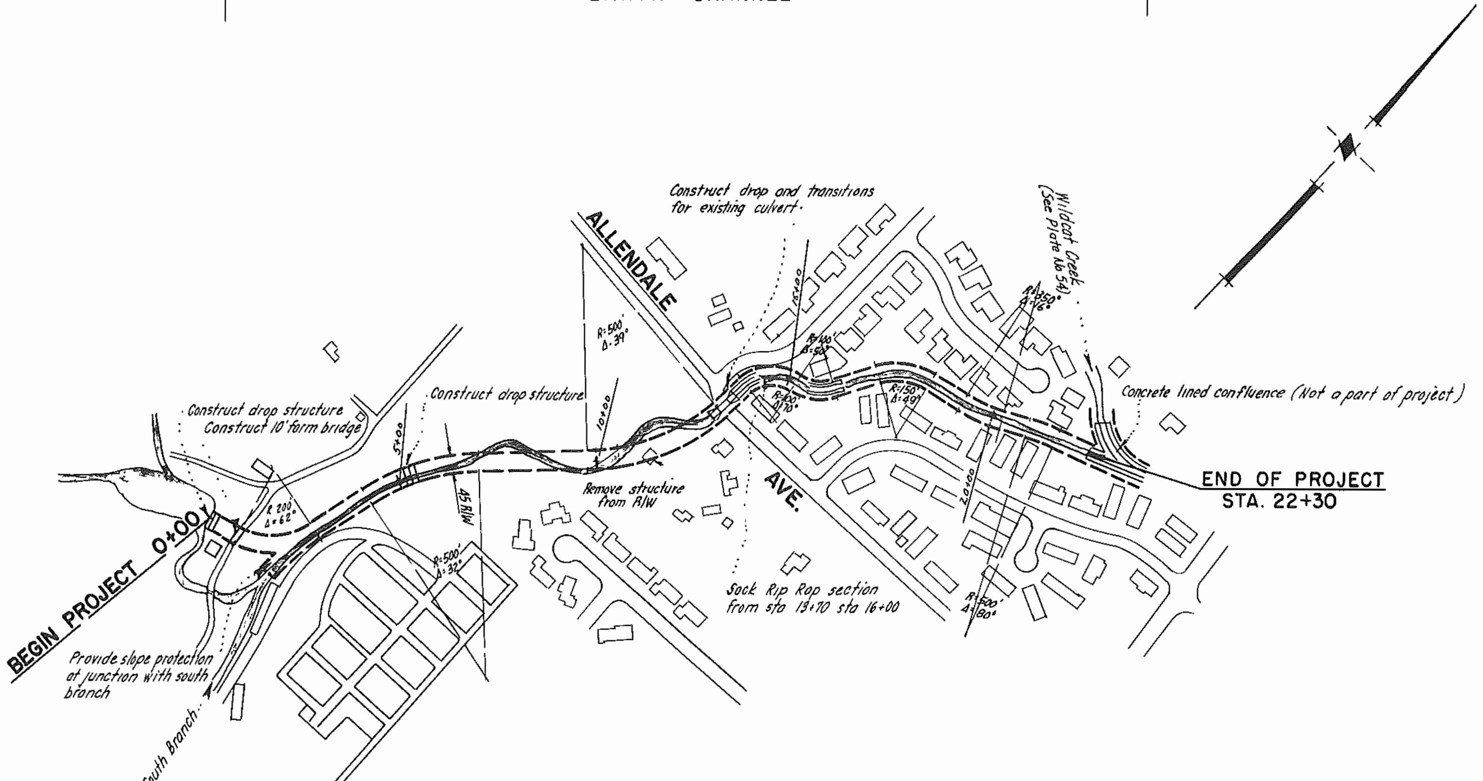
SANTA CLARA COUNTY, CALIFORNIA



PROFILE



TYPICAL UNLINED CHANNEL SECTION


Construct drop and transitions for existing culvert
Wildcat Creek (See Plate No 54)
ALLENDALE
AVE.
R=500'
Δ=39°
Construct drop structure
Construct 10' farm bridge
Construct drop structure
Concrete lined confluence (Not a part of project)
END OF PROJECT
STA. 22+30
BEGIN PROJECT 0+00
R 200'
Δ=62°
5+00
10+00
15+00
20+00
45' R/W
R=500'
Δ=32°
Remove structure from R/W
R=100'
Δ=90°
R=100'
Δ=70°
R=150'
Δ=49°
R=350'
Δ=16°
R=500'
Δ=80°
Sack Rip Rap section from sta 13+70 sta 16+00
Provide slope protection at junction with south branch
Vasona South Branch

PLAN

0 100 200 400 600
SCALE

NOTE:
Abandoned portions of existing creek to be backfilled

BASIS OF ELEVATIONS
U S G S 1954 DATUM BASED ON 1929 S.L.D.

MAP & GENERAL CONSTRUCTION PLANS
FOR IMPROVEMENTS IN ZONE NC-1 (NORTH CENTRAL)

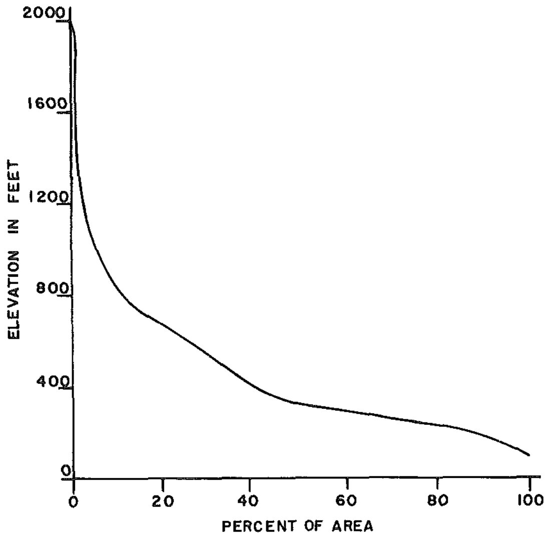
PROJECT NC-1-21
VASONA CREEK

SANTA CLARA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

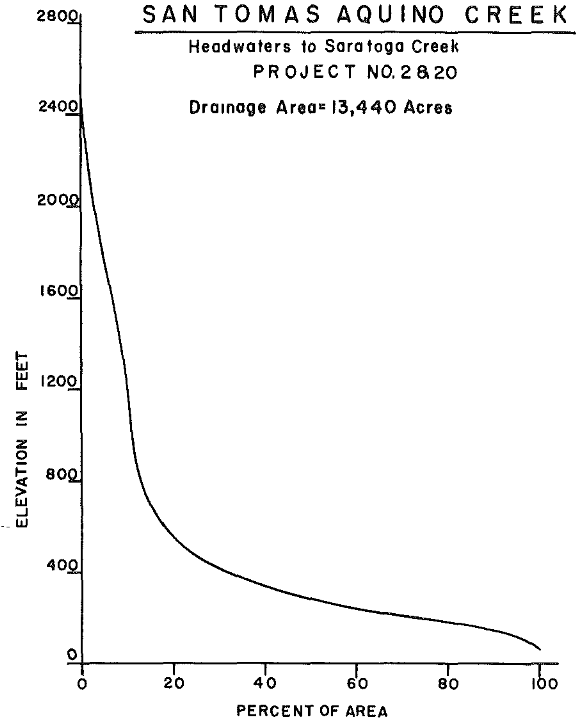
ENGINEERING APPROVAL By George H. Prime GEORGE H PRIME SUPERVISING ENGINEER	Design By CBC & DP Checked By CBC & DP	SCALE: As Shown
	Drawn By VK	JOB NO 1321
APPROVED FOR DEPT. OF PUBLIC WORKS By James B. Enochs JAMES B. ENOCHS DIRECTOR	GEORGE S. NOLTE CIVIL ENGINEERS SANTA CLARA, CALIF Date JAN 7, 1961	SHEET 2 OF 2

PLATE 89

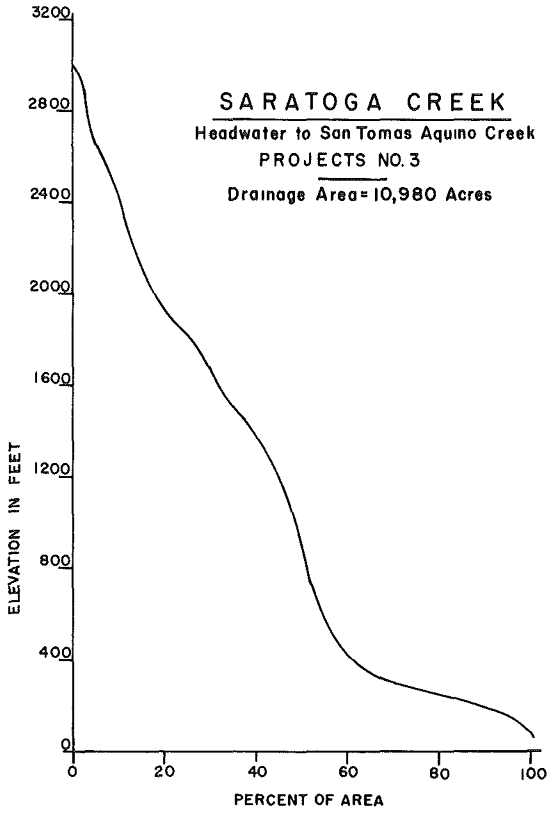
AREA-ELEVATION CURVES



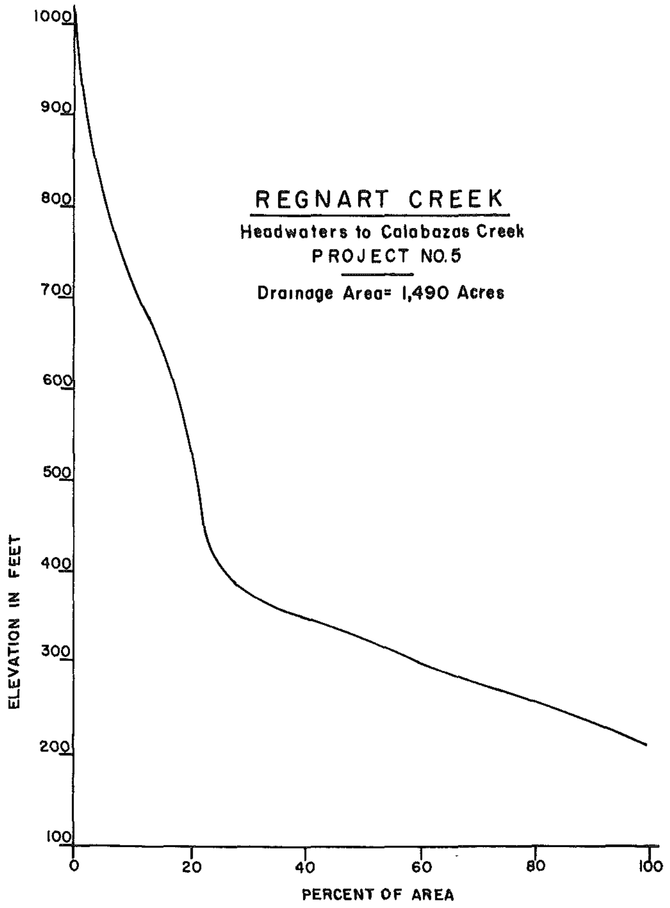
CALABAZAS CREEK
Headwaters to El Camino Real
PROJECT NO. 10
Drainage Area = 8,820 Acres



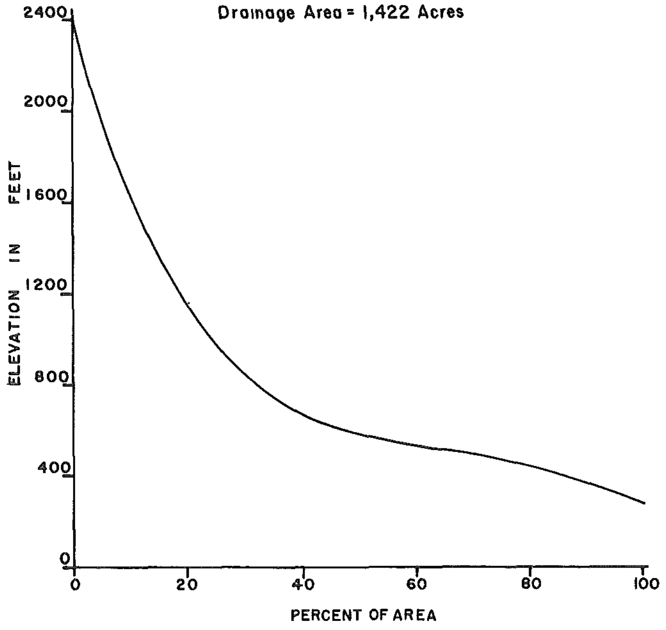
SAN TOMAS AQUINO CREEK
Headwaters to Saratoga Creek
PROJECT NO. 2 & 20
Drainage Area = 13,440 Acres



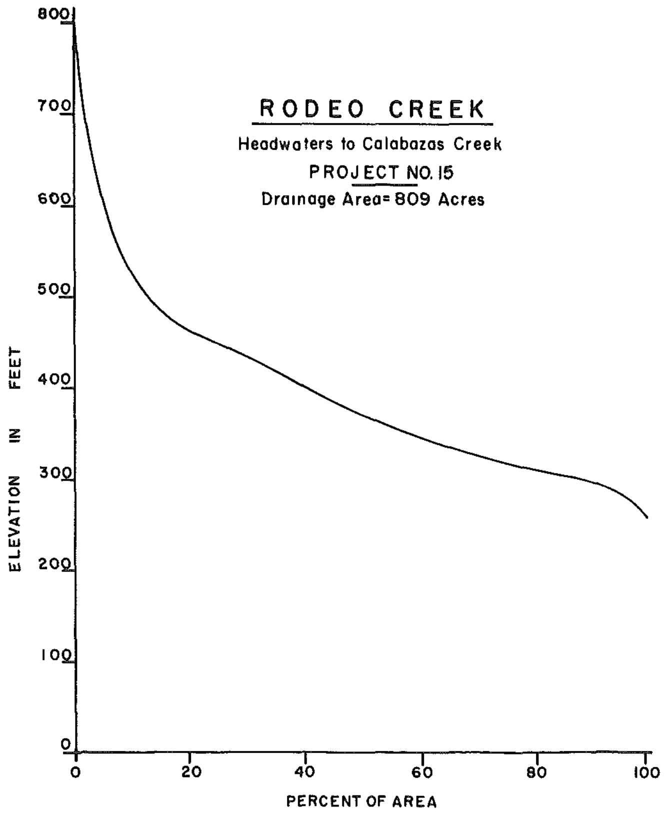
SARATOGA CREEK
Headwater to San Tomas Aquino Creek
PROJECTS NO. 3
Drainage Area = 10,980 Acres



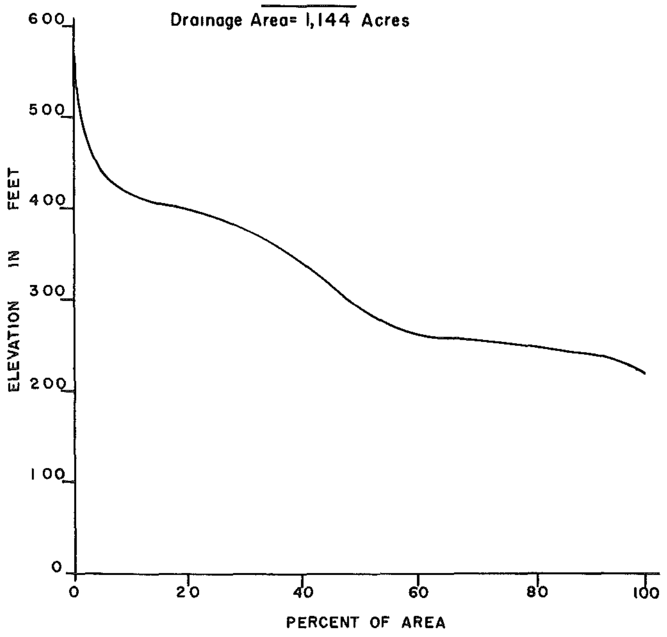
REGNART CREEK
Headwaters to Calabazas Creek
PROJECT NO. 5
Drainage Area = 1,490 Acres



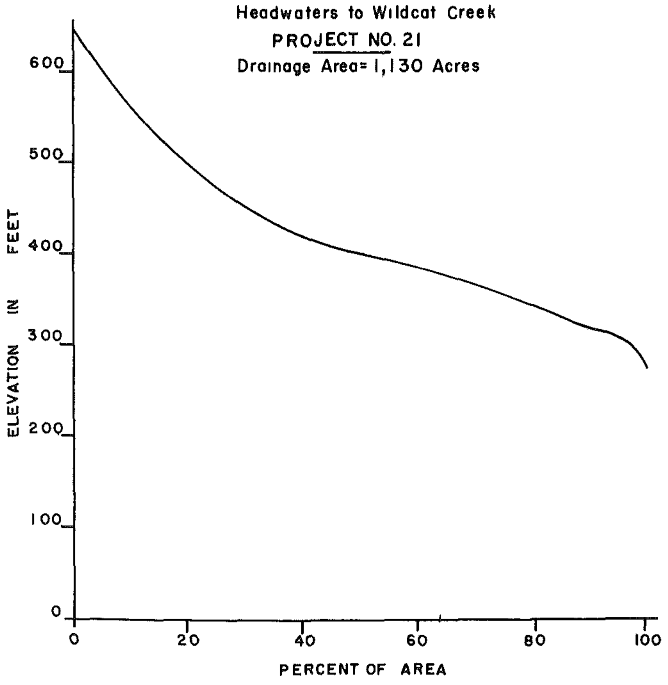
WILDCAT CREEK
Headwaters to San Tomas Aquino Creek
PROJECT NO. 8
Drainage Area = 1,422 Acres



RODEO CREEK
Headwaters to Calabazas Creek
PROJECT NO. 15
Drainage Area = 809 Acres

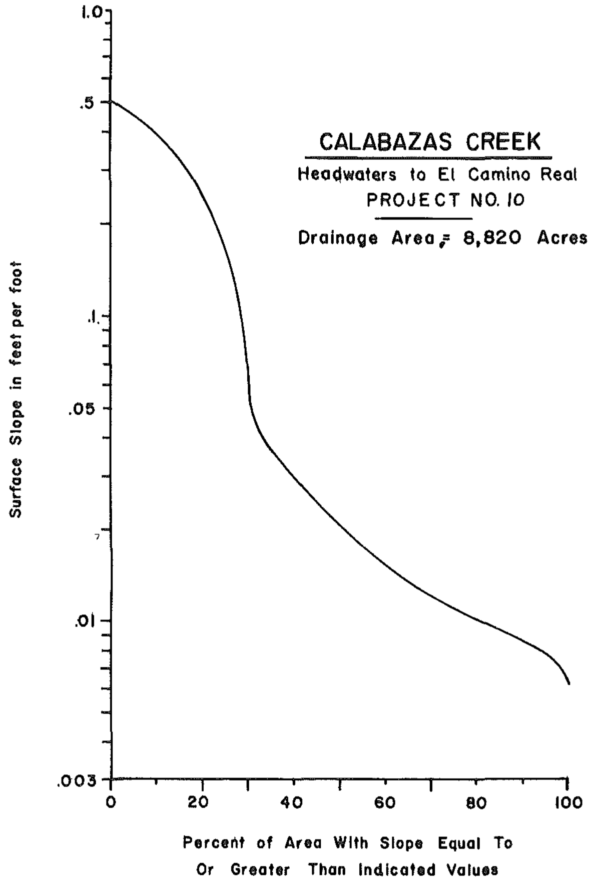


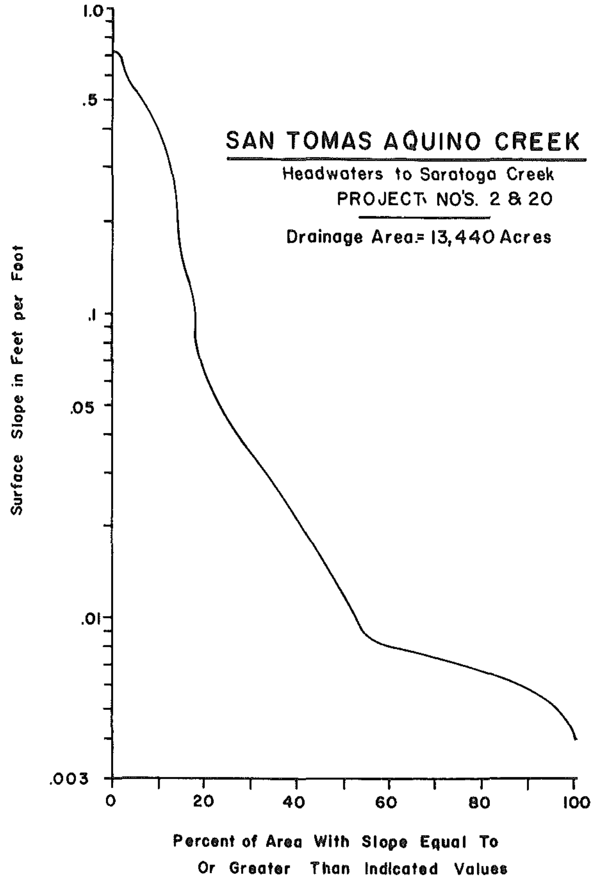
SMITH CREEK
Headwaters to San Tomas Aquino Creek
PROJECT NO. 16
Drainage Area = 1,144 Acres

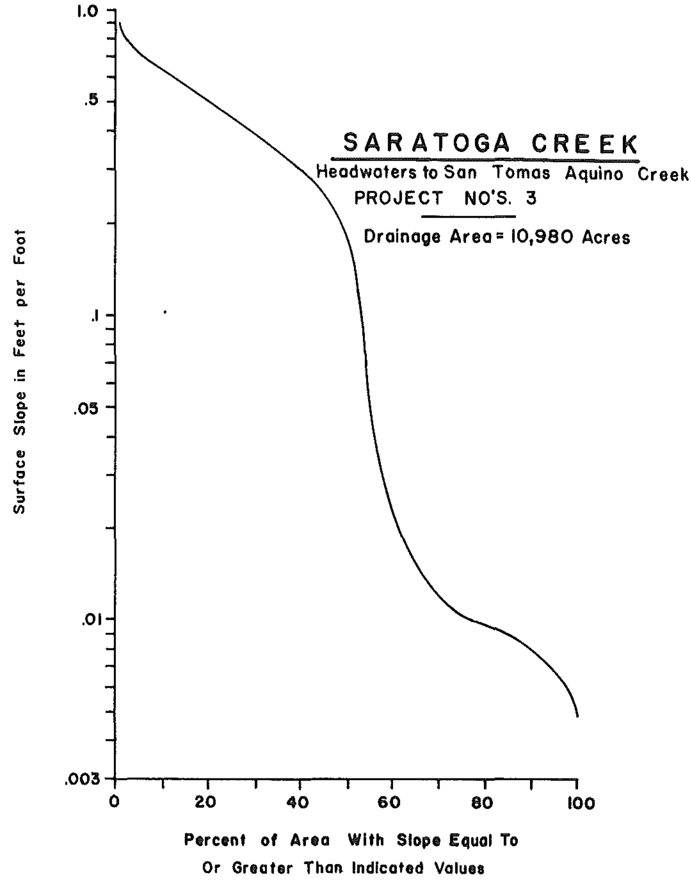


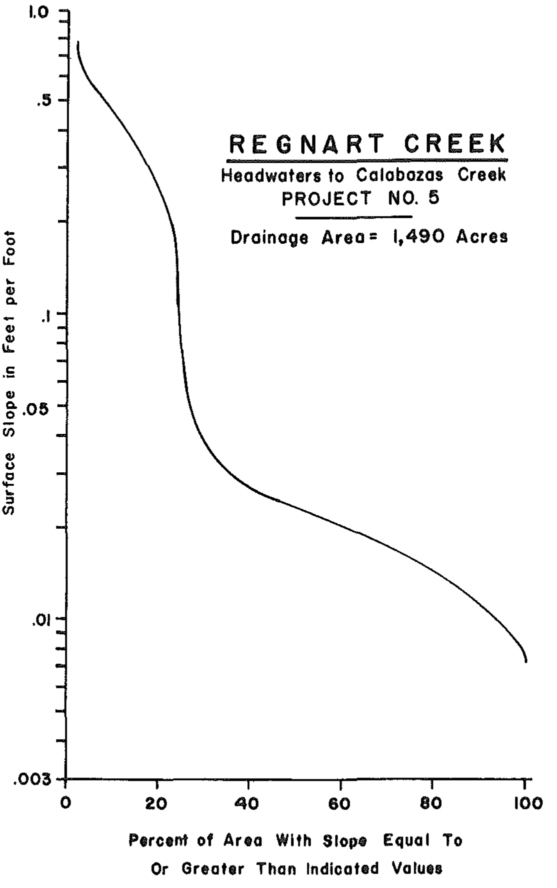
VASONA CREEK
Headwaters to Wildcat Creek
PROJECT NO. 21
Drainage Area = 1,130 Acres

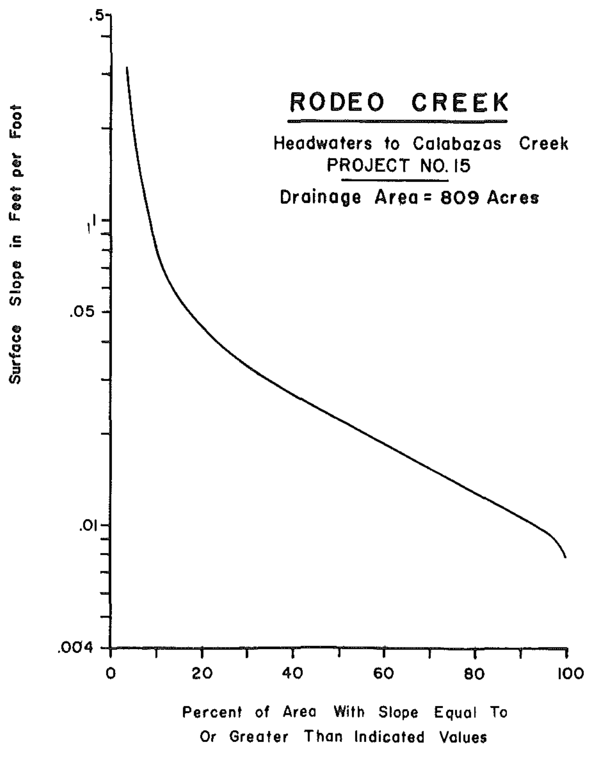
SLOPE-FREQUENCY CURVES

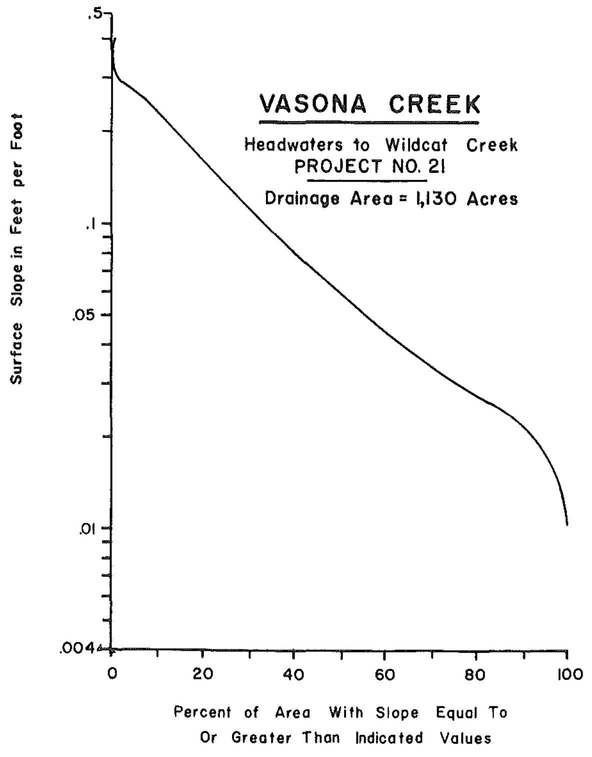


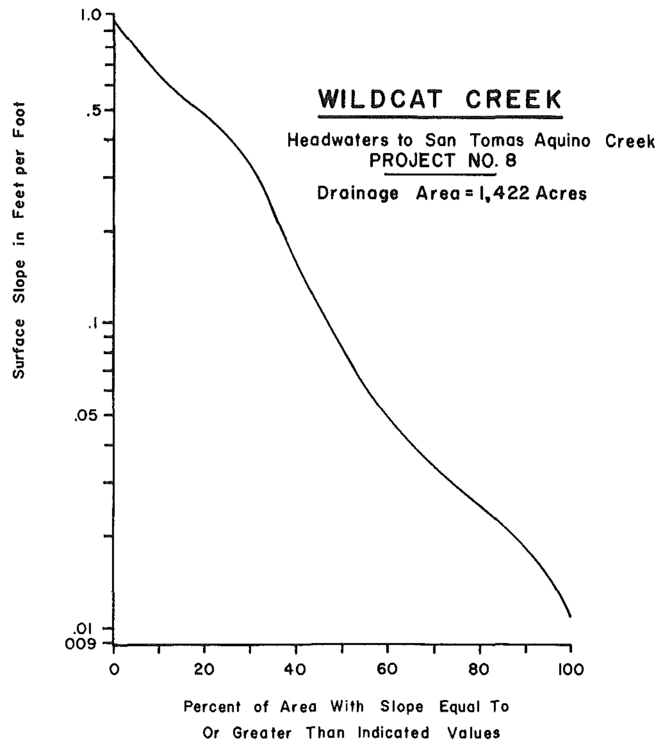


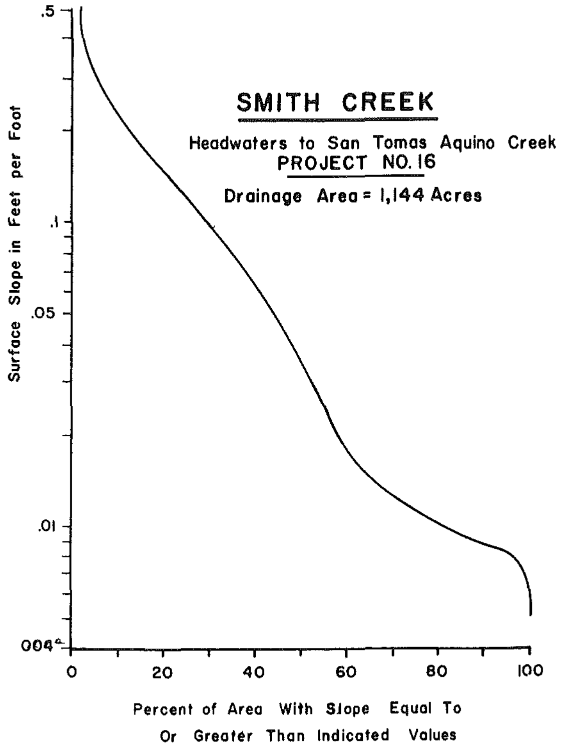




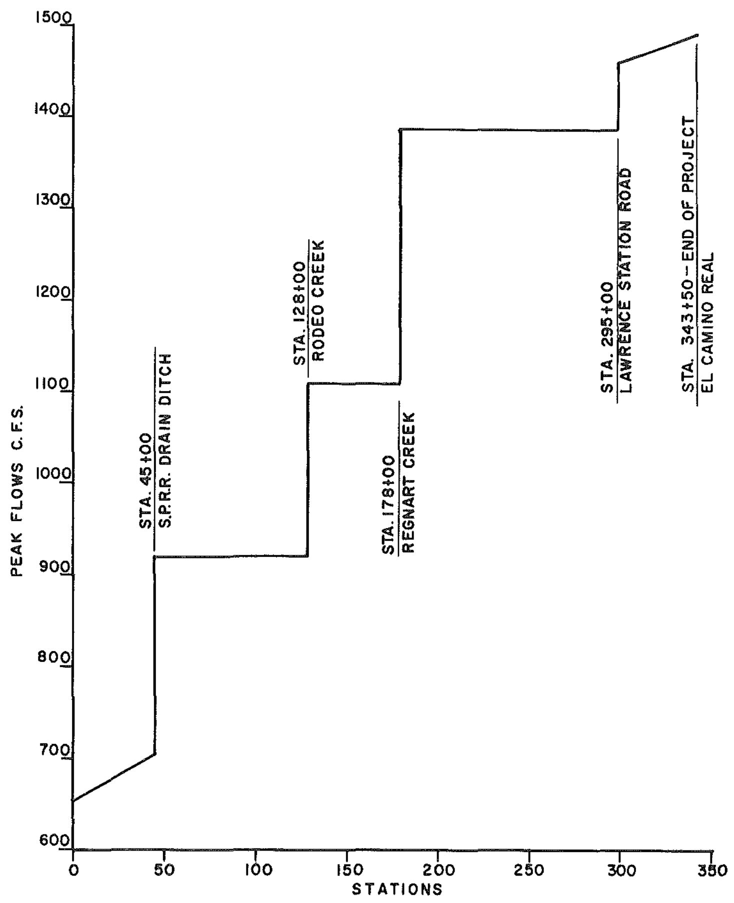








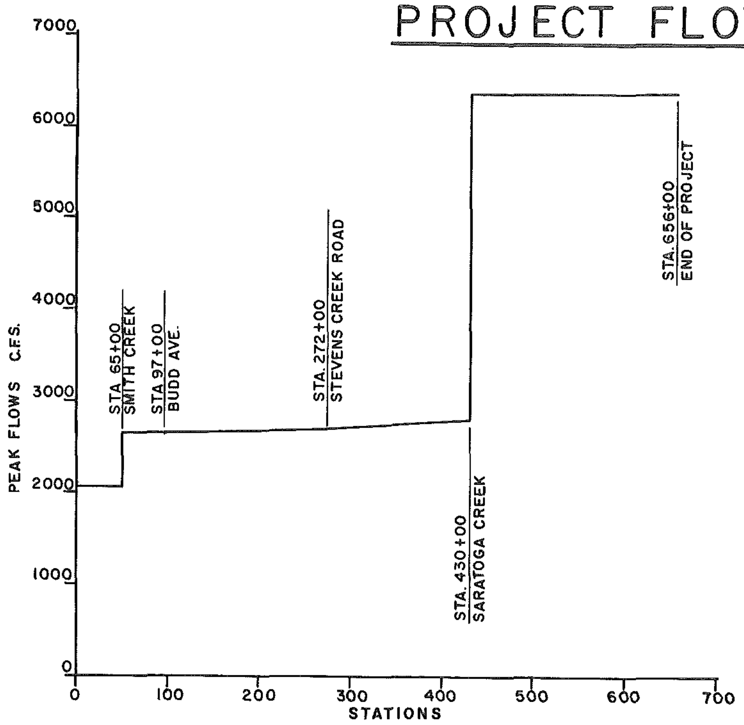
PROJECT FLOWS



CALABAZAS CREEK

Headwaters to El Camino Real

PROJECTS NO. 10

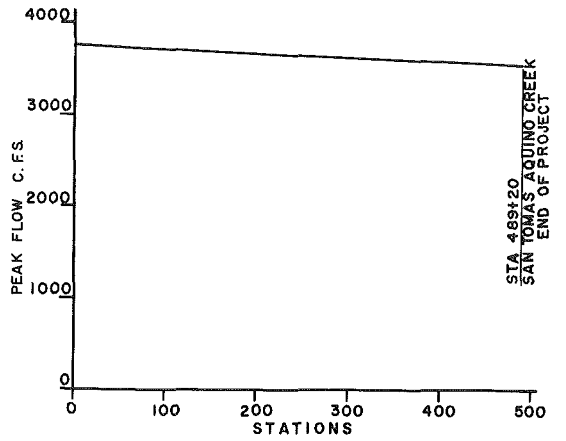


SAN TOMAS AQUINO CREEK

Wildcat Creek to Calabazas Creek

Holding Basin

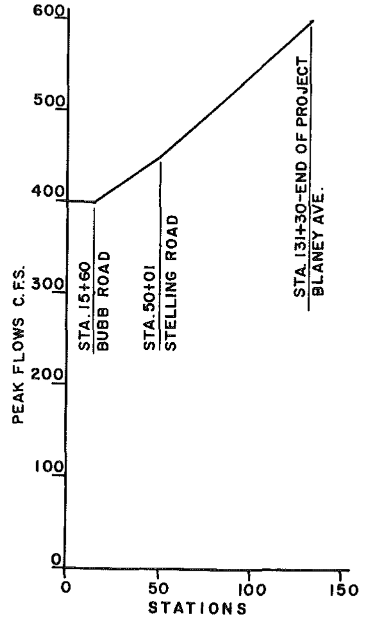
PROJECT NO. 2



SARATOGA CREEK

Headwaters to San Tomas Aquino Creek

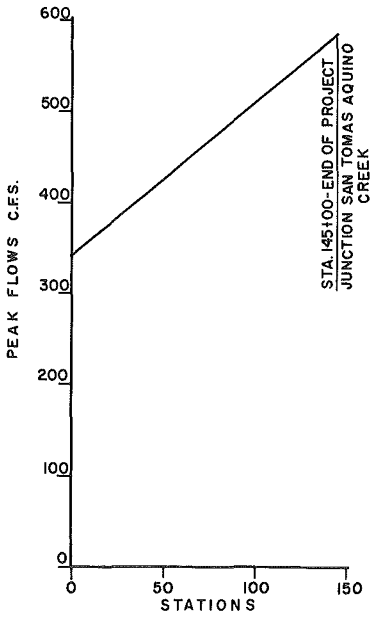
PROJECTS NO. 3



REGNART CREEK

Headwaters to Calabazas Creek

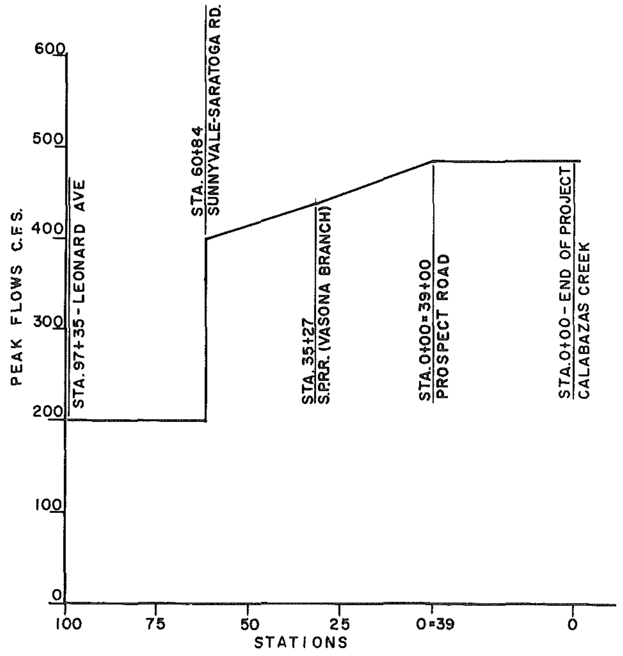
PROJECT NO. 5



WILDCAT CREEK

Headwaters to San Tomas Aquino Creek

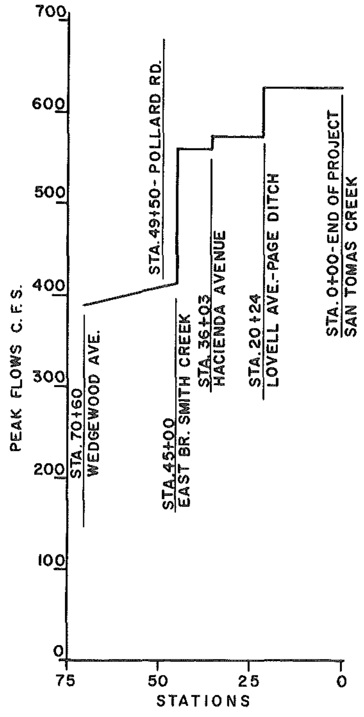
PROJECT NO. 8



RODEO CREEK

Leonard Ave. to Calabazas Creek

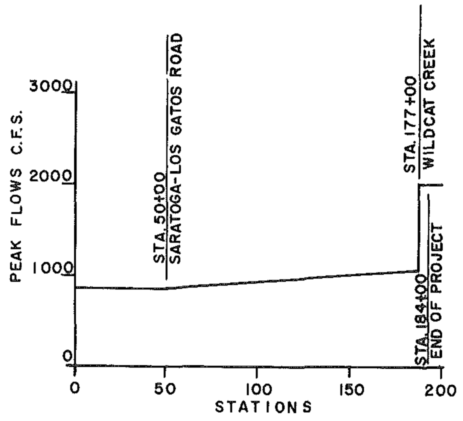
PROJECT NO. 15



SMITH CREEK

Wedgewood Ave. to San Tomas Aquino Creek

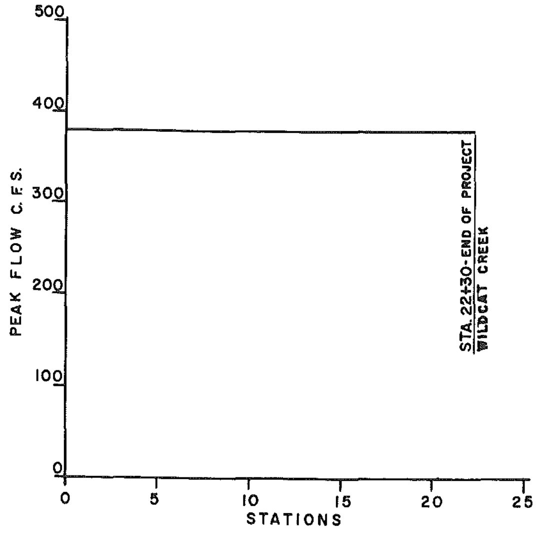
PROJECT NO. 16



SAN TOMAS AQUINO CREEK

Bainter Ave. to Wildcat Creek

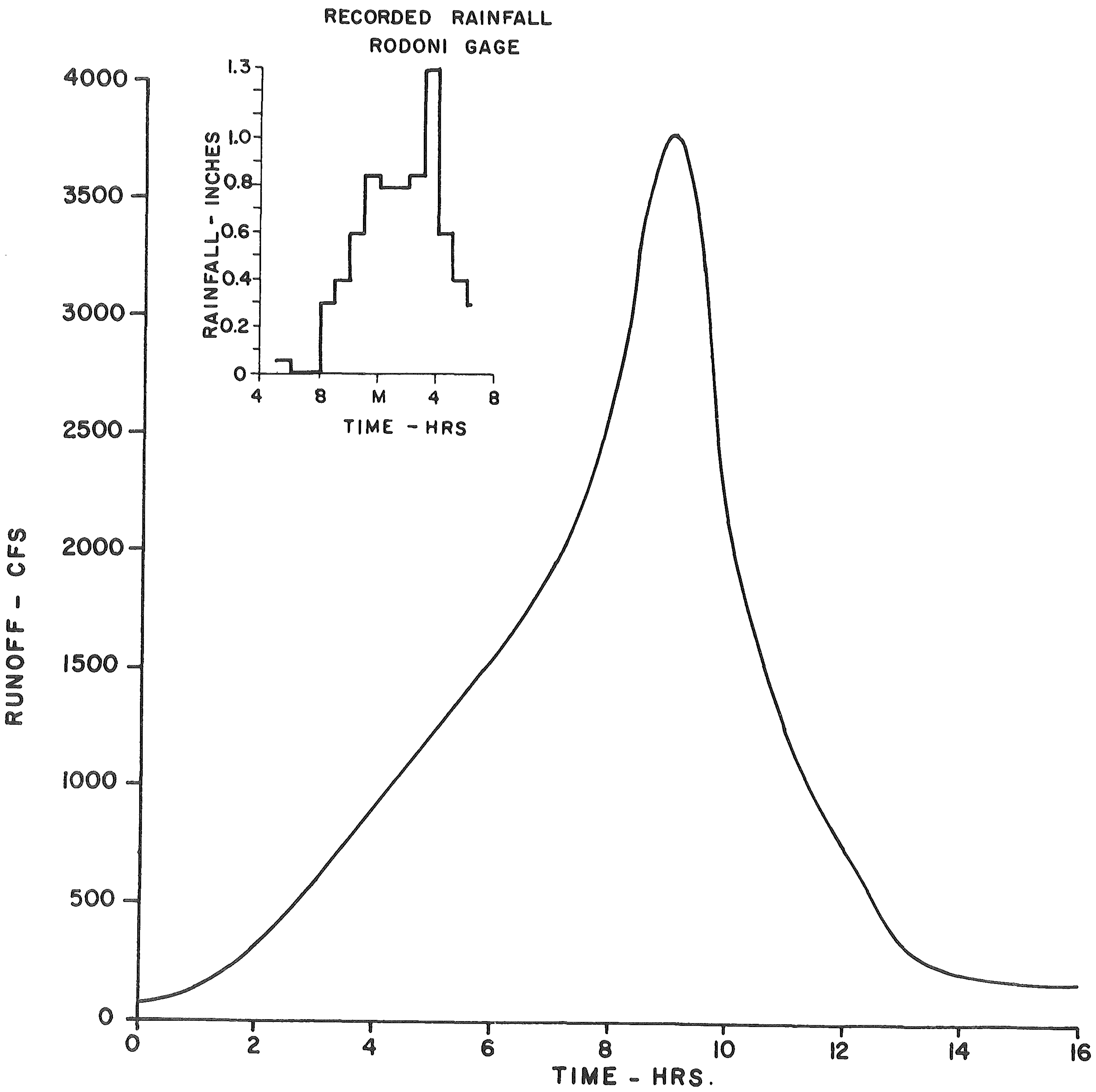
PROJECT NO. 20



VASONA CREEK

Headwaters to Wildcat Creek

PROJECT NO. 21



TYPICAL RUNOFF HYDROGRAPH

NOTES

1) The hyetograph shown is for data obtained from a recording precipitation gage located at the Rodoni Ranch in the Saratoga Creek basin during the December 1955 storm.

2) The hydrograph shown is based upon a computed extension of recorded December 1955 stream-flow data at the U.S.G.S. gage on Saratoga Creek above Saratoga. Peak flow shown represents the design flood peak at this station which has a drainage area of 8.97 square miles.